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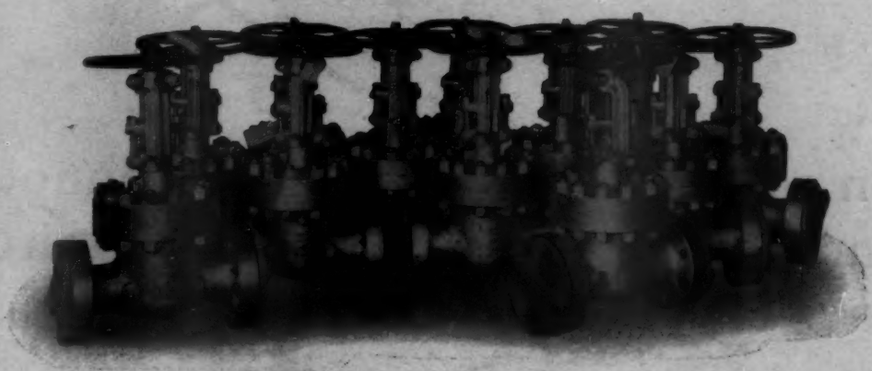
The OIL and GAS JOURNAL

PRODUCING REFINING ENGINEERING MARKETING

Published Every Thursday TULSA, OKLAHOMA, AUGUST 1, 1929 $6.00 a Year

150 Pounds Pressure CRANE VALVES 250 Pounds Pressure



Crane Series 150 Cast Steel High Pressure Gate Valves

For their cracking stills all chose this Crane master-valve

Among the oil companies now installing new high temperature cracking coils in their refineries are the Humble Oil & Refining Co., the Standard Oil Co. of New Jersey, the Standard Oil Co. of Louisiana, The Beacon Oil Co., the Shell Petroleum Corporation, the Phillips Petroleum Co., and the Imperial Oil Refineries, Ltd.

Choosing valves for this arduous service, engineers of each of these companies went with one accord to the same trusted source, to Crane Co. All are installing cast steel valves of the type shown above, rated at 1350 pounds working pressure at temperatures of 900°F., specially tested at 5000 pounds hydraulic pressures.

That such unanimity should be shown in selecting valves for perhaps as exacting a process as is used in present-day industry is indeed witness to the proved quality and dependable performance of Crane materials.

It is significant, too, that accompanying the orders for these super-strong valves came large orders for other materials, for various other refinery purposes. Whenever oil men anywhere need valves and fittings for any application, they can safely turn to Crane Co.

CRANE

GENERAL OFFICES: CRANE BUILDING, 836 S. MICHIGAN AVENUE, CHICAGO
NEW YORK OFFICE: 23 W. 44TH STREET
Branches and Sales Offices in One Hundred and Eighty Cities

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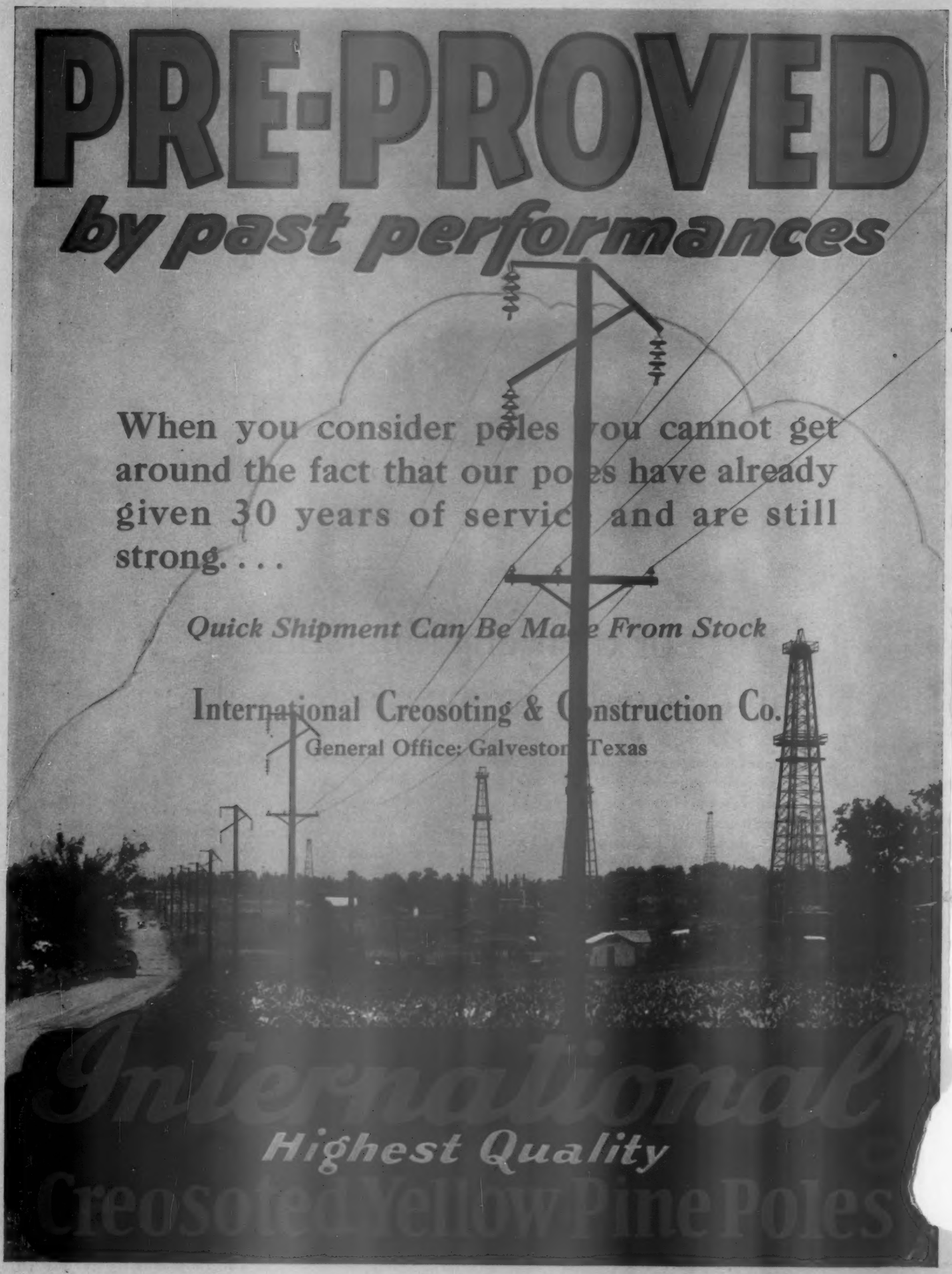
PRE-PROVED

by past performances



When you consider poles you cannot get around the fact that our poles have already given 30 years of service and are still strong. . . .

Quick Shipment Can Be Made From Stock

International Creosoting & Construction Co.

General Office: Galveston, Texas

International

Highest Quality

Creosoted Yellow Pine Poles

Gas Line Valve *without* By-Pass For 500 lbs. Working Gas Pressure.

WALWORTH DOUBLE DISC TEST PRESSURE GAS LINE GATE VALVES

Gas Line Valve *with* By-Pass For 500 lbs. Working Gas Pressure.

A Complete Line

The 16″ double disc valve with by-pass, gear operated, illustrated here, is a new Walworth Steeliron valve for gas lines —rated for 500 lbs. Working Gas Pressure.

From the small 2″ iron body valve on a water line to the monster 24″ gear operated iron body valves, Walworth's iron body, double disc valve line is complete, with sizes and types for every purpose and pressure where iron body valves are practicable to use.

Within the past few years Walworth has developed lines of double disc iron body gates especially for the oil industry, but also suitable for other service.

The double disc, parallel seat action of these valves is quick and positive, reducing leakage problems to a minimum and assuring long, reliable service. Including the 700-lb. test line, these valves for the higher pressures are made of Steeliron; and all lines, including the standard weight valves, are bronze mounted, with bronze stems.

Pressure ratings are as follows:

Standard	175 lbs.	Cold Oil, Water or Gas
700 lb. Test	400 lbs.	Cold Oil, Water or Gas
1000 lb. Test	500 lbs.	Cold Oil, Water or Gas
1600 lb. Test	800 lbs.	Cold Oil, Water or Gas

Gas Line Valve 500 lbs. Working Gas Pressure

At the Sixth International Petroleum Exposition and Congress, Tulsa, Oklahoma.

In booths 104, 105, 106 and 107, Oklahoma Building, Walworth is showing a complete line of valves, fittings, and tools, and Walworth C.N.I. Pipe.

WALWORTH

Walworth Company, General Sales Offices: 51 East 42nd St., New York
Plants at Boston, Mass.; Kewanee, Ill.; Greensburg, Pa.; and Attalla, Ala.

Distributors in Principal Cities of the World

Walworth Company, Limited, 620 Cathcart St., Montreal, P. Q.
Walworth International Co., New York, Foreign Representative

The Oil and Gas Journal, issued weekly by The Petroleum Publishing Company, 114-116 West Second Street, Tulsa, Oklahoma. Subscription price $6.00 a year; 15 cents a copy. Entered as second-class mail matter December 15, 1911, at the post office at Tulsa, Okla., under the Act of March 3, 1879.

A SERIES OF ARTICLES ON THE

INSURANCE NEEDS OF THE OIL MAN

Time and science have combined to minimize the effect of various hazards which operate to the discomfort of the oil industry. Yet the process has been tedious—and expensive.

In keeping pace with the progress in every field of business practice we have developed a staff recognized by the insurance profession as specialists. These specialists have rendered outstanding service to our customers in every branch of the oil business. Our clients have learned that for the many existing oil business risks—in producing, transporting or refining—there are logical and economic forms of insurance.

The character and amount of insurance necessary is a matter to be determined by expert counsellors—specialists such as we have. An inquiry will command the service of these men.

This is the first of a series of advertisements in these pages, in which the many forms of oil industry insurance will be identified and explained.

The Frates Company

INSURANCE—BONDS

THIRD FLOOR
THE PHILTOWER

TULSA, OKLAHOMA

PHONE: 2-6116
L. D. 309

BUY PERFORMANCE!

You may have only ten threads to cut a day or you may have ten thousand—but if you figure your requirements on a cost per piece basis, or if you count thread accuracy of value, you will buy Landis.

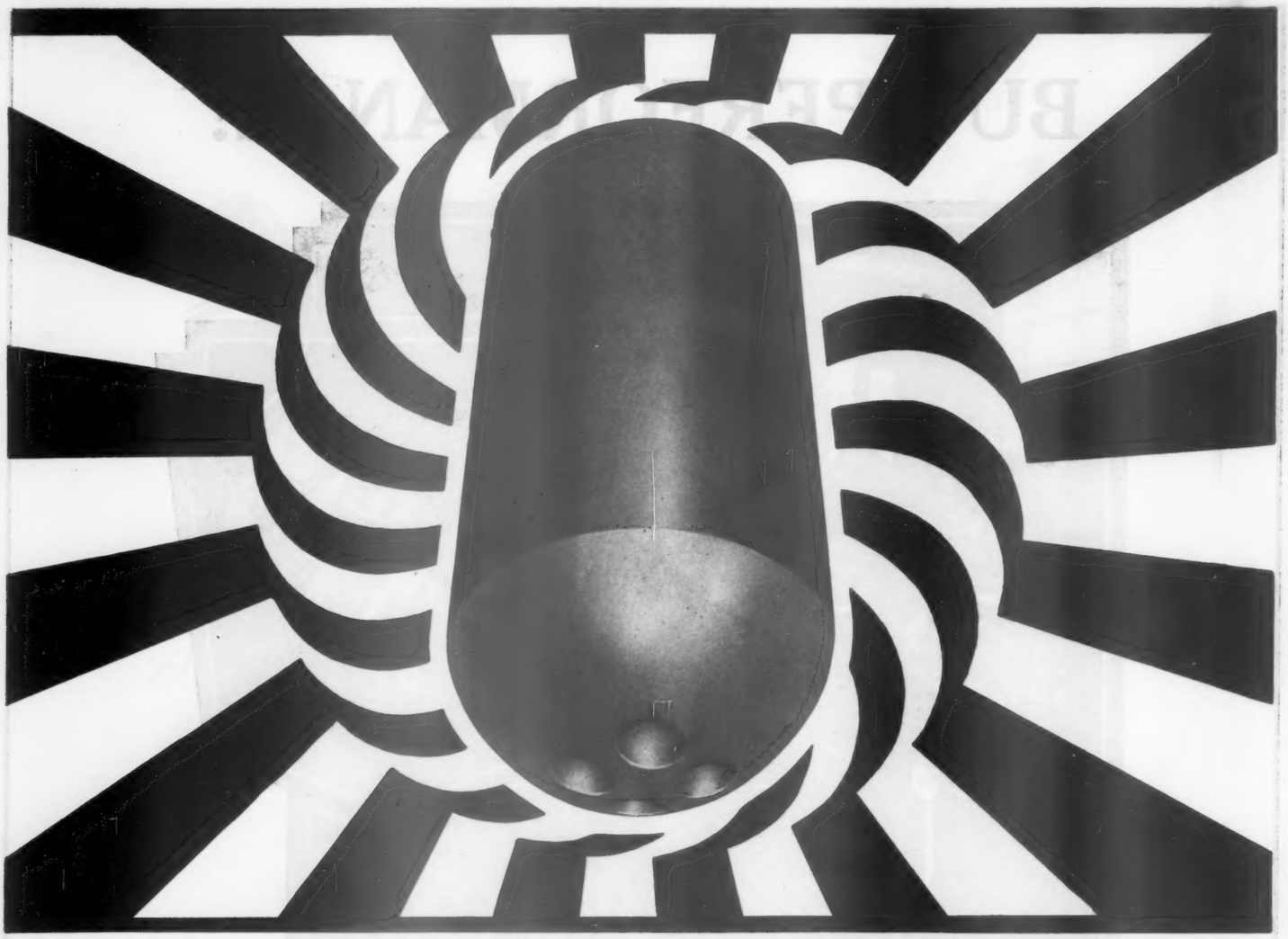
After all, performance alone determines worth. The performance of a Landis Bolt Threading Machine is unequalled. It is easily set up, fast and accurate in operation and, owing to the long life of the Landis Chaser, extremely economical in tool cost.

Get the details. Catalogue No. 32 "Landis Threading Machinery" will be sent upon request.

LANDIS MACHINE COMPANY, Inc.

Waynesboro, Penna. U. S. A.

REPRESENTED IN THE DOMESTIC OIL FIELDS BY: Colcord-Wright Machinery & Supply Co., St. Louis, Mo.; D. S. Mair Machinery Co., Houston, Tex.; Woodward, Wight & Co., New Orleans, La.; Herberts Machinery & Supply Co., Los Angeles; Herberts Moore Machinery Co., San Francisco, Calif.; Hendrie & Bolthoff Mfg. & Supply Co., Denver, Colo.



SAFE AND DEPENDABLE—MAKES GOOD IN DEEP WELLS

Long before you reach the productive oil sands in drilling your well you have invested a fortune of good size. Common sense and ordinary caution will tell you that it is good business to protect that investment in every way possible. This is particularly true in a deep well—every foot you do down increases the investment and the risk of accident.

Full Line on Display
Booth No. 99
Oklahoma Building

The Baker-Burch Cement Float Shoe is a modern deep well drilling necessity. It floats the string down safely and dependably and eliminates possibility of accident.

The Baker-Burch Cement Float Shoe is made of solid concrete, cast and anchored in rounded grooves in a standard plain casing shoe, made of seamless steel. It contains a celeron ball check valve, positive in action. A cylindrical hole leads down from the top into the valve chamber and four smaller holes lead down from the chamber to the bottom, as shown in the illustration. Passage through the concrete plug is ample for free circulation.

The solid concrete guide is amazingly strong—it is made from the special Baker Formula concrete, and will not shatter or fracture while guiding the string down the hole. Nor will it crush when set on the bottom.

The protective portion of the concrete plug extending below the shoe or guide acts as a safeguard for the valve chamber, which is placed above the bottom of the casing shoe to give the greatest possible strength to the chamber. The valve is thus fully protected and reliable.

Notwithstanding the great strength of the concrete in this Float Shoe, it is readily disintegrated under the drill and is easily circulated away, leaving no refuse of any kind in the hole to interfere with subsequent operations.

Baker Cement Equipment is the original and exclusive product of its kind and is fully protected by Patents granted and pending. To insure safety to your investment, specify and see that you get BAKER Cement Equipment.

You Invest a Fortune to Reach the Productive Oil Sands

Mid-Continent Branches
Tulsa, Oklahoma Houston, Texas

Export Sales Office
25 Broadway, New York City

BAKER
OIL TOOLS, INC.
P. O. Box L, Huntington Park, Calif.

California Branches
Coalinga, Ventura, Taft, Bakersfield

Mid-Continent Distributors
B. & A. SPECIALTY CO.
220 E. Brady St., Tulsa, Okla.
2301 Commerce St., Houston, Texas

Use Baker Cement Equipment and Protect Your Investment

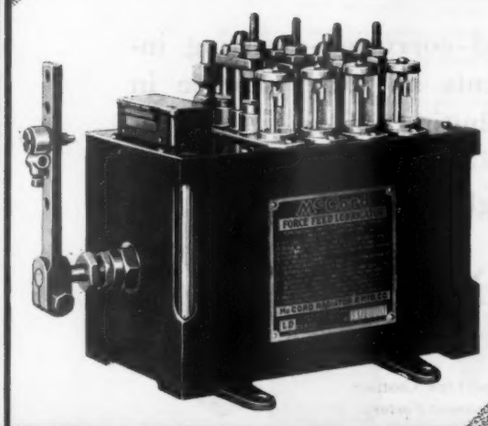
McCord LUBRICATORS

STANDARD OF THE OIL FIELD

There is no denying the best recommendation any product can offer is the approval of its users. More McCord force feed lubricators are in use in the oil fields, giving satisfactory service than all other makes combined.

DISTRIBUTED BY
National Supply Co.
ALL BRANCHES

21—165 H.P. Units—
McCord Equipped



McCord Radiator & Mfg. Co.
LUBRICATOR DIVISION
Detroit, Mich.

The finest pipe coating that money can buy is produced from more than twenty years of experience that makes the perfect blending of tested and proved corrosion-resisting ingredients an exact science in contributing longer life to thousands of miles of pipe lines throughout the country.

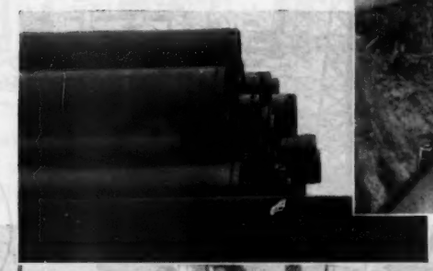
HILL, HUBBELL & COMPANY

Division
General Paint Corporation
Manufacturers of Highest Grade Oil Industry Paints and Pipe Line Coatings
General Offices: SAN FRANCISCO *Mid-Continent Factory:* TULSA

Offices:
SAN FRANCISCO - TULSA - NEW YORK - CHICAGO - LOS ANGELES - HOUSTON - PORTLAND - SEATTLE - DALLAS

"FOR EVERY JOINT ON THE LINE"

Grooved pipe for Victaulic Couplings —as easy to ship as plain end pipe.



Train-load of 6" pipe, grooved for Victaulic Couplings, South Chester Tube Company, Chester, Pa.

12" oil line with Victaulic Couplings laid over yielding, swampy ground.

VICTAULIC COUPLINGS

TWENTY-NINE carloads of six inch pipe leaving the South Chester Tube Company of Chester, Pennsylvania, for the oilfields—a thirty-two mile high pressure oil line—every length grooved for Victaulic Couplings.

In the world's oilfields Victaulic Couplings have earned standardization by the leading oil producing and refining companies for these reasons:

First: Victaulic Couplings provide leak-proof lines for crude oil, gas, water and refined products—lines that stay leak-proof for the life of the pipe—at vacuum and up to all working pressures.

Second: Victaulic Couplings enable lines to be laid faster and at less labor cost, because unskilled, primitive labor can do all the work.

Third: Victaulic Couplings give flexibility at every joint and provide for the contraction and expansion of the lengths of pipe they connect—provide a strain-free line that is not injured by vibration, line sag or even shifting sideways under full working pressure.

Fourth: Victaulic Couplings permit the opening of the line at any joint for repairs or cleaning or for cutting in a branch line—with a minimum interruption of service and without injury to either pipe or coupling.

Fifth: Victaulic Couplings and Fittings are available for all sizes of steel, spiral weld, wrought iron and cast iron pipe in all sizes from ¾ inch up—for any pressure.

VICTAULIC COMPANY OF AMERICA
26 Broadway New York

VICTAULIC DISTRIBUTORS

Western
SMITH SEPARATOR COMPANY
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D. B. McWILLIAMS
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F. S. VAN BERGEN
Minneapolis, Minn.

New England
EASTERN SERVICE COMPANY
Boston, Mass.

Ohio
CASE HARDENING SERVICE COMPANY
Cleveland, Ohio

All-purpose pipe couplings "For every joint on the line"

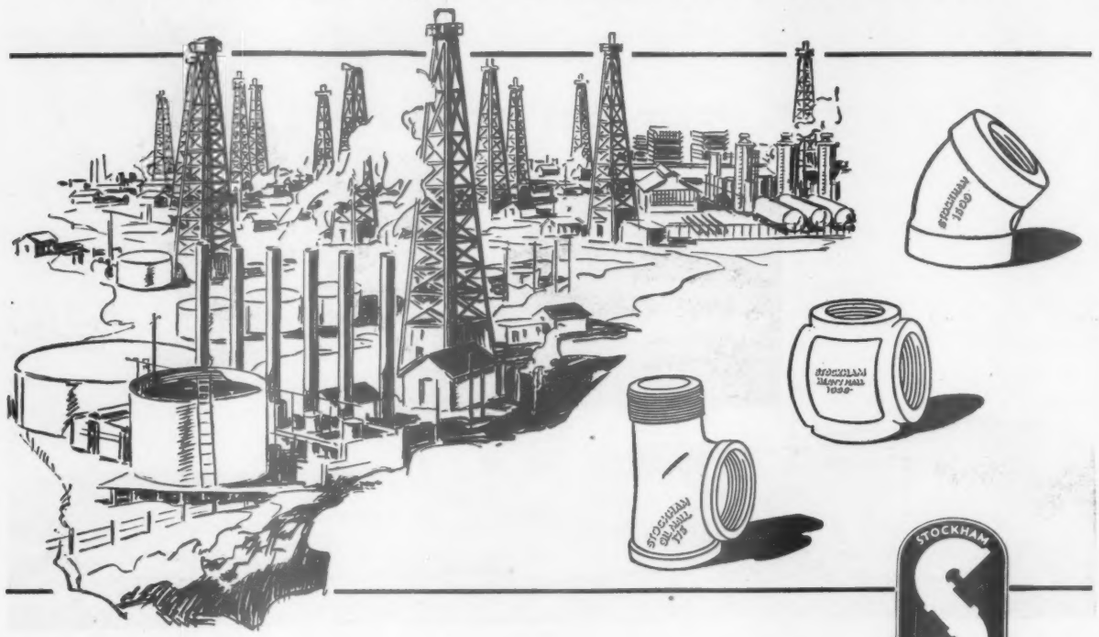
FLEXIBLE LEAK-PROOF
VICTAULIC
REG U.S. PAT. OFF.
PIPE COUPLINGS

For detailed information on uses, users, installations, sizes, prices—write or mail this coupon.

VICTAULIC COMPANY OF AMERICA
26 Broadway New York
Please send Victaulic Bulletin No. 1.
Name _____
Street _____
City _____

FOR CRUDE OIL, GAS, WATER, SEWAGE, COMPRESSED AIR, ETC.

STOCKHAM FITTINGS *stand the stress of* OIL COUNTRY USE



In oil service Stockham Fittings meet every expectation.

They are strong—their threads are accurate—the inner surfaces are smooth. Installation is easy and performance beyond reproach.

Then there are special Stockham lines designed to meet the exacting requirements of the oil industry—to withstand unusual vibration, strain and temperature changes.

The full Stockham line of over seventy-five hundred different fitting patterns is, too, always available from our large stocks. The following classifications can be quickly supplied:

CAST IRON	MALLEABLE	ELECTRIC CAST STEEL
Screwed Flanged Drainage	*Standard Extra Heavy Special Oil Heavy Oil Hydraulic*	*Screwed Flanged*

Distributed by

Republic Supply Company

GENERAL OFFICES - HOUSTON, TEXAS

OIL AND GAS WELL SUPPLIES

ROTARY AND CABLE TOOLS

Drilling Resumed in 40 Hours *after another cement had failed!*

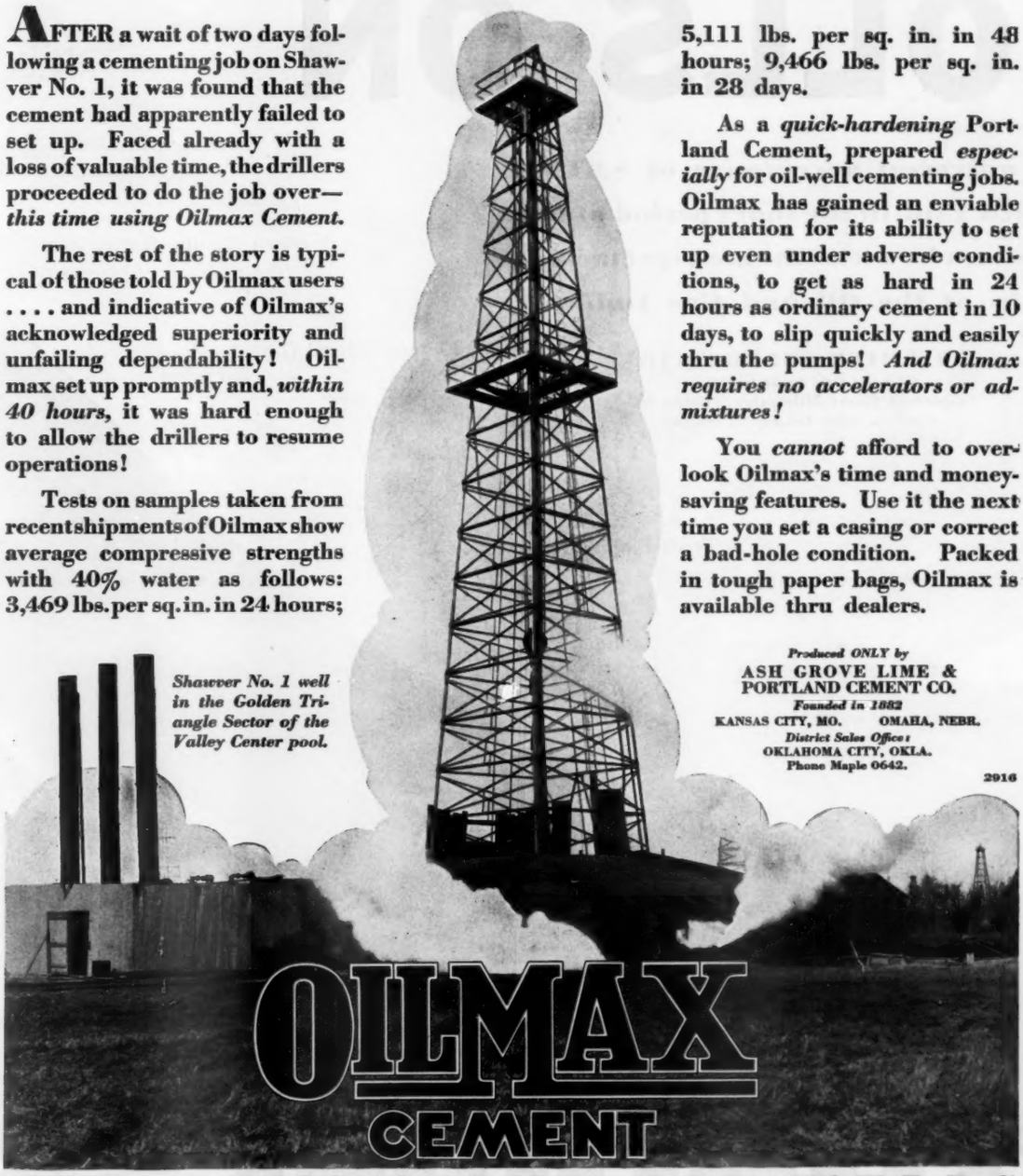
AFTER a wait of two days following a cementing job on Shawver No. 1, it was found that the cement had apparently failed to set up. Faced already with a loss of valuable time, the drillers proceeded to do the job over—*this time using Oilmax Cement.*

The rest of the story is typical of those told by Oilmax users .... and indicative of Oilmax's acknowledged superiority and unfailing dependability! Oilmax set up promptly and, *within 40 hours,* it was hard enough to allow the drillers to resume operations!

Tests on samples taken from recent shipments of Oilmax show average compressive strengths with 40% water as follows: 3,469 lbs. per sq. in. in 24 hours; 5,111 lbs. per sq. in. in 48 hours; 9,466 lbs. per sq. in. in 28 days.

As a *quick-hardening* Portland Cement, prepared *especially* for oil-well cementing jobs. Oilmax has gained an enviable reputation for its ability to set up even under adverse conditions, to get as hard in 24 hours as ordinary cement in 10 days, to slip quickly and easily thru the pumps! *And Oilmax requires no accelerators or admixtures!*

You *cannot* afford to overlook Oilmax's time and money-saving features. Use it the next time you set a casing or correct a bad-hole condition. Packed in tough paper bags, Oilmax is available thru dealers.



Shawver No. 1 well in the Golden Triangle Sector of the Valley Center pool.

Produced ONLY by
ASH GROVE LIME & PORTLAND CEMENT CO.
Founded in 1882
KANSAS CITY, MO. OMAHA, NEBR.
District Sales Offices
OKLAHOMA CITY, OKLA.
Phone Maple 0642.

2916

OILMAX CEMENT

FOR CEMENTING OIL WELLS

The WAVE of ACCEPTANCE ROLLS ON

The universal acceptance of SMITH-Welded Pipe in the short period of two years marks one of the most spectacular epochs of the Oil and Gas Industry.

A. O. SMITH CORPORATION
Oil & Gas Field Products Division
General Offices: Milwaukee, Wisconsin
New York, Tulsa, Los Angeles, Houston

Magnolia Gas Line . . . . . 225 miles

Mississippi River Fuel Gas Line . . . . . 325 miles

Pacific Gas & Electric Gas Line . . . . . 237 miles

Western Public Service Gas Line . . . . . 287 miles

El Paso Natural Gas Line . . . . . 205 miles

Roxana Oil Line . . . . . 100 miles

Texas-Empire Oil Line . . . . . 636 miles

Magnolia Gas Line . . . . . 160 miles

Texas Oil Line . . . . . 368 miles

Dixie Gulf Gas Line . . . . . 280 miles

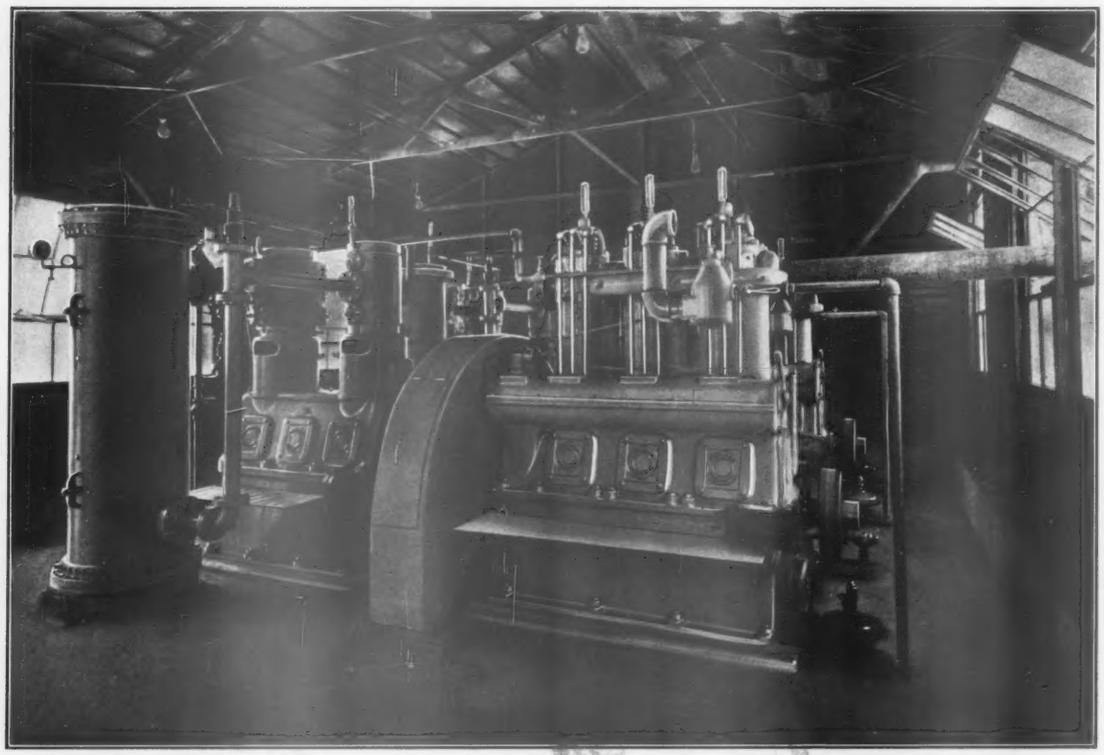
SMITHWELDED

Lone Star Natural Gas Line . .
. . . . . 100 miles

Arkansas-Louisiana Pipe Line
. . . . . 87 miles

Southern National
Gas Line . . . .
. . . 257 miles

LINE PIPE



An installation of two CP duplex two-stage vertical compressors, each direct-connected to a CP gas engine. Vacuum Oil Co., Lake Charles, La.

CP direct-connected oil or gas engine driven compressors provide an exceptionally compact compressed air or gas plant that cannot be excelled in EONOMY, RELIABILITY and SMOOTHNESS of OPERATION. Capacities in this type compressor range from 423 to 3000 cubic feet per minute; pressures from 10 to 1000 pounds per square inch. Send for illustrated descriptive bulletin.

Chicago Pneumatic Tool Co.

6 East 44th Street, NEW YORK, N. Y.

Sales and Service Branches all over the World

Whealton & Townsend Co., Inc., *Authorized Distributors*

417 South Hill St., Los Angeles
1502 Magnolia Bldg., Dallas

120 East Brady St., Tulsa
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C-288

CHICAGO PNEUMATIC

COMPRESSORS

TUBBS O. KALE: THE BIG OIL AND GAS MAN

from TULSA

says he wishes he had had a GUIBERSON CATCHER *on his bankroll; he dropped it somewhere between* MONTE CARLO *and* TIA JUANA

Fully Patented

POOR fellow, his intentions were right, but something happened. And now he is back in God's country, drilling more gushers, with a chain on his pocketbook and a Guiberson Tubing Catcher in every well.

The Guiberson Tubing Catcher positively stops the fall of a string of tubing within three inches. This action may be depended upon, regardless of the amount of fluid in the hole, due to the strong spring, and despite the clogged condition of mud and paraffin around the catcher, due to the heavy striker weight, which overcomes its retarding influence. Dove-tailed tracks insure an immediate grappling of the slips with the casing wall, and at right angles to the fall. Tubing is as safe as if it were stored in your warehouse, if you have a Guiberson Tubing Catcher on the bottom.

"Better Be Safe Than Sorry"

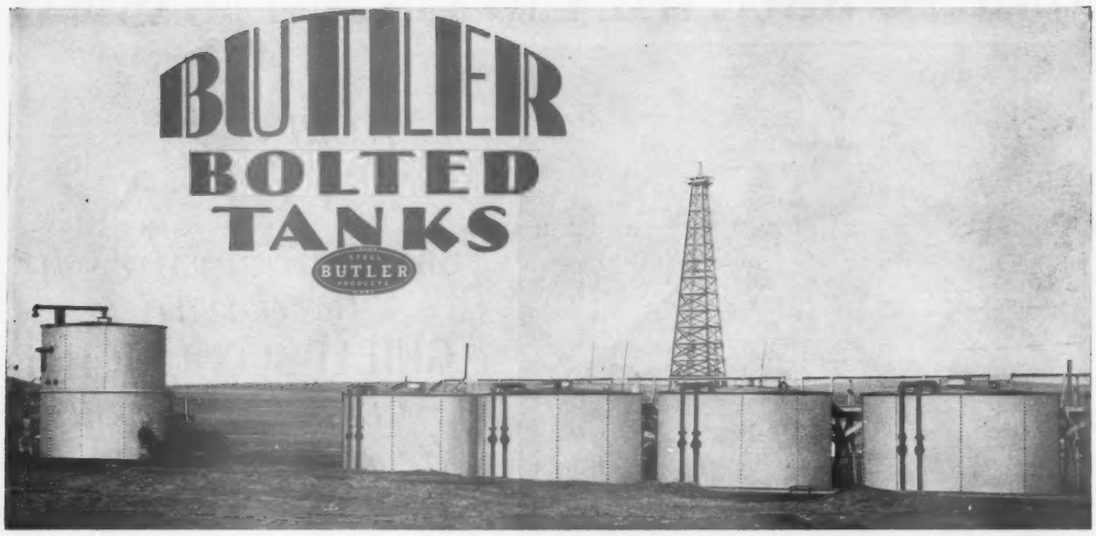
THE GUIBERSON CORPORATION
Box 1106, Dallas, Texas

California Branch: 1506 Santa Fe Ave., Los Angeles

402 W. First St., TULSA | 321 Osage St., PONCA CITY | 506 Trust Bldg., NEWARK, O.

GUIBERSON

BETTER BE SAFE THAN SORRY



Earlsboro Field—Anna James Lease—T. B. Slick

MORE often than not—prominent operators equip noteworthy leases in famous fields with Butler Bolted Steel Tanks.

With them, it is a matter of relying upon the organization capable of rendering fast and reliable field tank service and of furnishing bolted steel or welded tanks which can be depended upon in the emergency and through the long, everyday service of settled production.

Because of precision punching and forming, and fewer seams per tank, Butler Bolted Steel Tanks are erected faster and with fewer operations. At one stroke, huge machines place bolt holes in each steel plate—uniform as to both size and spacing. All steel plates, formed for a given size tank are interchangeable. Man-sized clean-out openings, 2x4 feet, are standard and the bolts are removable from the outside.

Butler Bolted Steel Tanks are made in sizes up to and including 10,000 barrels capacity. Butler Welded Steel Tanks are made to any specifications. If you haven't one, send for a copy of the Butler Oil Field Tank Catalog.

BUTLER MANUFACTURING COMPANY
Kansas City, Mo. **Minneapolis, Minn.**

In addition to its long established standards of Bolted Tank construction, The Butler Manufacturing Company announces production of Bolted Steel Tanks conforming with dimentional standards—A. P. I. first edition. Butler A. P. I. specification Bolted Steel Tanks will carry the official monogram reproduced here:

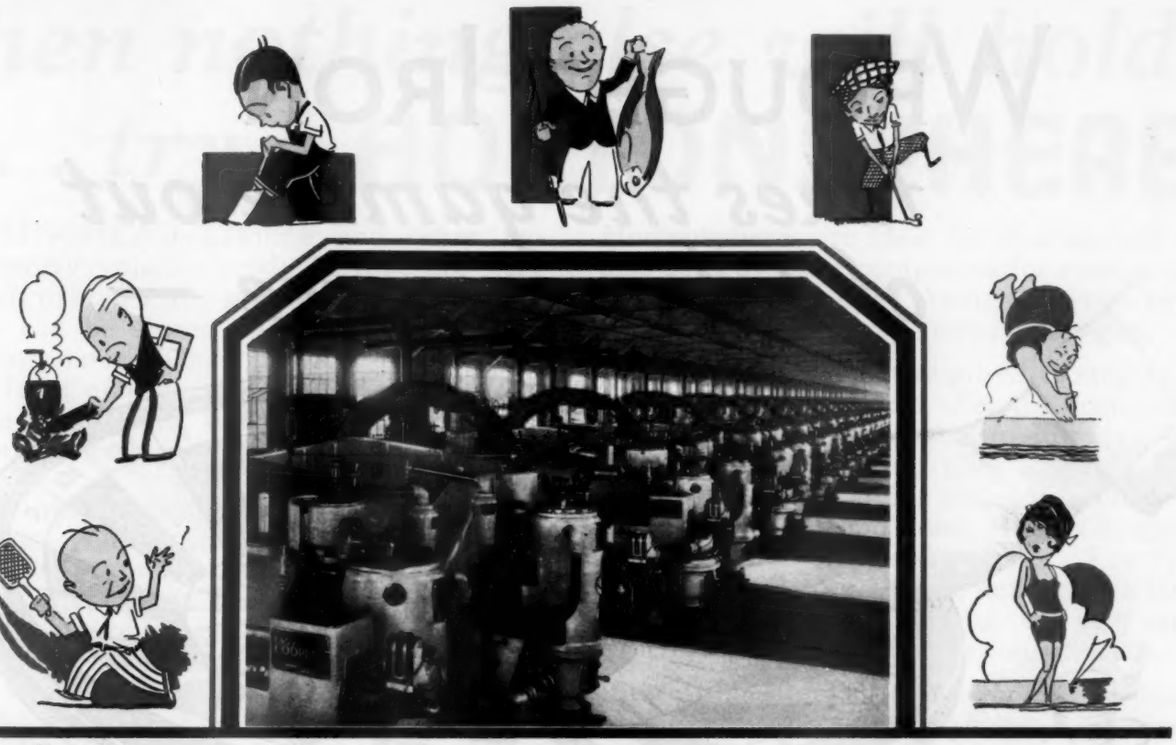
This, and the Butler monogram, is a double pledge of the utmost value in Bolted Steel Tanks.

Butler Products

Ready-Made Buildings
Bolted and Welded Oil Field Tanks
Truck Tanks
Welded Storage Tanks (above and underground)
Visible Measuring Pumps
Barrels, Buckets, Cans, Funnels
Pipe for conduit, well casing and other purposes

These reliable dealers are ready to render speedy Butler Bolted Tank Service:

Drane-Humphrey Co., at San Angelo, Big Lake, Pyote and McCamey, Texas; and Roswell, New Mexico.
Keyes-Butler Tank Co., of Casper and Cody, Wyoming.
Drane Tank Co., at Tulsa, Holdenville, Seminole, Hallett and Shawnee, Oklahoma; El Dorado, Madison, Wichita and Valley Center, Kansas.
Muskegon Boiler Works, Muskegon, Mich.
Gulf Coast Tank Company, 1612 Moffit Street, Houston, Texas, V. P. Hughes, Prop.
Thomas Moran, at Oil City, Shreveport and Georgetown, Louisiana.
M. A. Trimmer, at Blackwell and Lovell, Oklahoma.



Vacations and COOPER Engines

THE good old summer time is now with us and you should be entitled to a little vacation. But what has that to do with Cooper Engines? This:

If Coopers are working for you, there will be nothing to worry about back at the plant. If they're right when you leave, they'll be right when you get back.

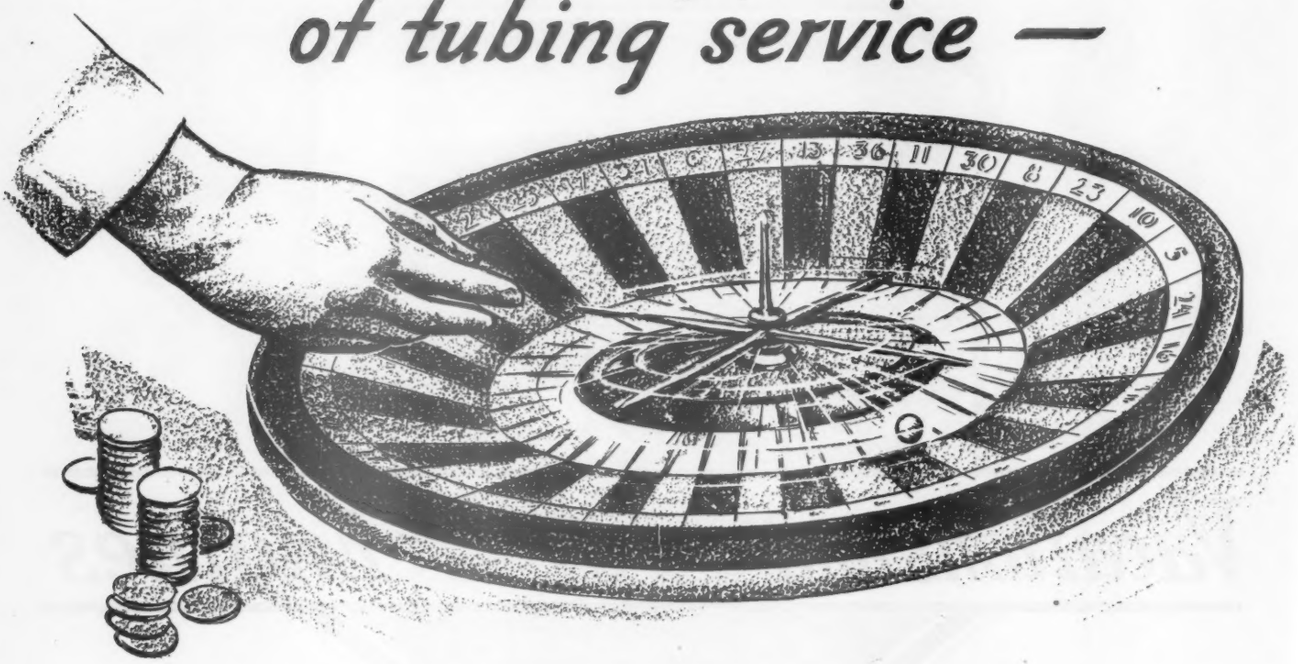
Coopers are making many vacations possible and making them more enjoyable too — by their continuous capacity for earning greater profits. They are adding a little all the year round to time for other things. Their uninterrupted service on the load saves time and money enough to warrant vacations and removes at least one reason why some men, responsible for compressor operation, go vacationless.

Here's hoping you'll enjoy yours.

THE COOPER-BESSEMER CORPORATION
Formerly The C. & G. Cooper Co. and The Bessemer Gas Engine Co.
Mount Vernon, Ohio Grove City, Pa.
1116 Magnolia Bldg., Dallas 630 E. 61st., Los Angeles Calif.
615 Kennedy Bldg., Tulsa, Okla.

COOPER

WROUGHT IRON
takes the gamble out of tubing service —



YOU don't take any chance when you specify genuine wrought iron tubing of BYERS make, because wrought iron has long demonstrated its ability to give two to five times greater service than ordinary pipe material. A large number of service records in oil fields everywhere conclusively demonstrate the superior qualities of corrosion resistance displayed by BYERS Tubing.

Why gamble with cheaper material? Why risk expensive interruptions and delays, due to premature tubing failures? Insist on genuine BYERS. It will keep faith with you as it is now doing with hundreds of others.

A. M. BYERS COMPANY
Established 1864 Pittsburgh, Pa.
DISTRIBUTORS
International Supply Co. Jarecki Mfg. Co.
Norvell-Wilder Hdwe. Co. Oil Well Supply Co.

BYERS
Galvanized TUBING

When nothing else will hold it . . . try a HORTONSPHERE

CASINGHEAD gasoline and other extremely volatile products that are very difficult to hold without excessive evaporation losses can be stored under pressure in the Hortonsphere. This spherical tank is the ideal form of pressure container, offering a simple method of overcoming evaporation without operating costs.

You cannot escape evaporation losses by dumping your production on the market without any storage. The price you get under such a sales policy reflects the loss which someone else must stand. The refiner or natural gasoline manufacturer can add materially to his profit by equipping to hold off season production of highly volatile gasolines for better market conditions.

Hortonspheres are ideal for this use and are also used by some companies for storing ammonia and gas. They are made in two types —one for liquid storage and one for gas.

Where pressure is not required to stop evaporation, Wiggins Roofs offer the economical means of cutting out losses in storage. The Wiggins Floating Roof rises and falls with the level of the oil and is therefore equally effective under all conditions. It finds its greatest application on working tanks. The Wiggins Breather Roof with its flexing deck stops all evaporation in standing storage tanks which remain nearly full for long periods.

Interesting literature on evaporation losses and how to stop them is available to anyone requesting it from our nearest office.

CHICAGO BRIDGE & IRON WORKS

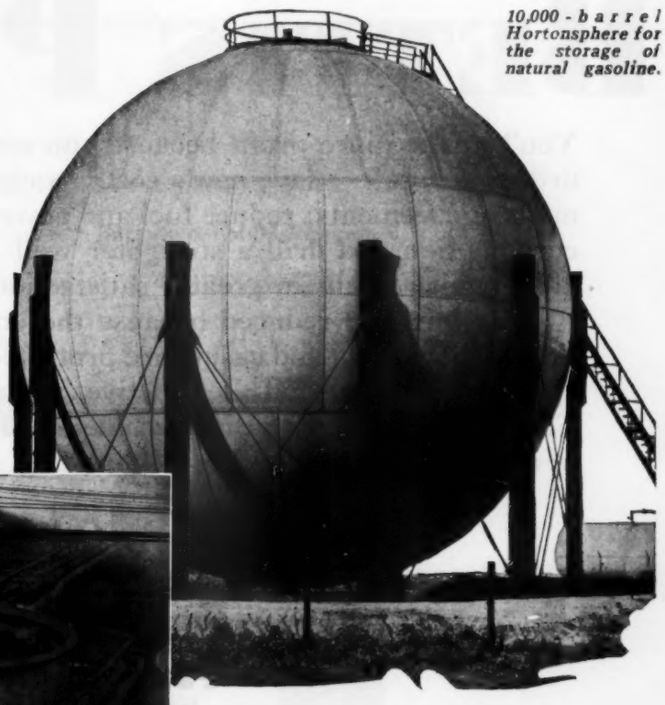
DALLAS	3341 Magnolia Bldg.	DETROIT	1514 Lafayette Bldg.
NEW YORK	3147 Hudson Terminal	PHILADELPHIA	1615 Jefferson Bldg.
CLEVELAND	2204 Union Trust Bldg.	SAN FRANCISCO	1054 Rialto Bldg.
CHICAGO	2128 Old Colony Bldg.	HAVANA, CUBA	Apartado 2507

STOP EVAPORATION LOSSES

with a
WIGGINS
FLOATING ROOF

Send for this booklet. It contains valuable information regarding evaporation losses and how to stop them.

Wiggins Floating Roof on a 35-foot tank at an eastern refinery.



10,000-barrel Hortonsphere for the storage of natural gasoline.

or a
HORTONSPHERE

Oil Well Contractors *Profit* by BETTIS PROTECTION

You'll make more profit because you can drill faster, safer; save many costly equipment replacements; reduce fuel and power consumption and drill a straighter well—all of which result in greater satisfaction. Fishing jobs are reduced because the entire drilling string and casing are protected against abrasion and destructive wear. There is no extra metal in the hole to add to a fishing job. If you are wild-catting, a large saving is made in transportation because fewer replacements are required and less fuel is needed. The total cost of the well will be far less.

Bettis Protectors are the original and genuine anti-friction rubbers, fully covered by Patents. No seams, no hinges, no wire, no metal added to hole. Used in more than 95% of all deep wells now drilling.

Ask for Catalog.

"Best bet yet"

Patterson-Ballagh Corporation
Insurance Exchange Bldg., Los Angeles, Calif.

Mid-Continent Distributors:
Bettis Sales Co., 616 Public National Bank Bldg., Houston

New York Office: 39 Cortlandt St.

Carried in stock at Los Angeles, Santa Fe Springs, Ventura, Bakersfield, Coalinga, Long Beach, Tulsa, Houston, Wink, Tex., and New York City.

REPUTATIONS COME HARD

AND GO EASY...PROTECT YOURS

The station that sells Phillips 66 enjoys INSURED REPUTATION. Its customers are satisfied and loyal—they keep coming back for more—because this superior gasoline of Controlled Volatility gives them easy starting, rapid acceleration, power, mileage to a degree they've never known before. Such customers are a mighty valuable asset. They're profit builders. Let Phillips 66 help you build up a big list of loyal, steady customers . . . Write or wire for quotations.

◆ ◆ ◆

Backed by a tremendous organization engaged in the production of a line of superior motor fuels including "Phillips 66," "Phillips Aviation" and "Phillips Benzo-Gas." The vast experience of the research department of this company is offered to jobbers and refiners on any problem in CONTROLLED VOLATILITY.

PHILLIPS PETROLEUM COMPANY, BARTLESVILLE, OKLA.

PHILLIPS 66

NATURAL GASOLINE FOR CONTROLLED VOLATILITY

SPECIALIZING IN SIMPLICITY

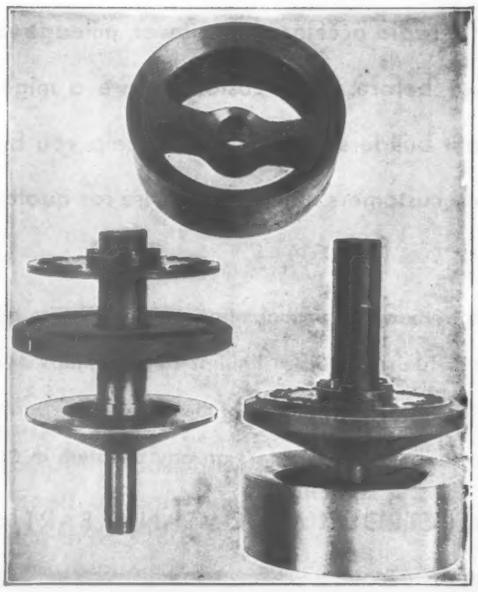
MacCLATCHIE originates and manufactures oil field specialties that have fewer parts and are more easily operated—and the ***built-in*** quality bests all competition.

Consider these when cementing oil wells . . .

—MacCLATCHIE—
QUICK CHANGE HEADS

Installed in 30 seconds—efficient despite crossed or worn threads—and the more pressure within the casing, the tighter the slips and rubber become. *Use them for cementing, circulating and capping your wells.*

—MacCLATCHIE—
MUD PUMP VALVES



There are more MacClatchie Valves used than any other make in the world . . . *quality is responsible. Sold by all Continental Supply stores.*

—MacCLATCHIE—
QUICK UNIONS

Multi-purpose unions that are fast and sure because there are no threads to start or stab. Connected or disconnected in a flash. *For cement heads, rotary swivels, stand pipes, etc.*

WRITE TODAY FOR THE RECORD-BREAKING SERVICE RECORDS OF THESE MacCLATCHIE QUALITY PRODUCTS

MacCLATCHIE MANUFACTURING COMPANY
COMPTON - - - - - - - - - - - CALIFORNIA

Proved PROTECTION *for* Iron *and* Steel

LITHARGE of correct physical character and extreme chemical purity is a necessity in oil-refining. Such litharge is made by us. You can always rely on its unvarying uniformity. Our nearest warehouse can give you quick shipment.

Proved by the rigid tests of experts . . . *proved* by its continued use for more than 100 years—pure red-lead is recognized as the standard protective paint for metal.

On railroads, in the shipyards . . . and on bridges, tanks and steel structures of every type . . . you'll find red-lead paint in excellent condition after exceptionally long periods of service.

That is why paint authorities say: "Three coats of pure red-lead give protection for metal that is unexcelled in length of life."

Fine, uniform, highly oxidized . . . there is no better red-lead obtainable than Dutch Boy red-lead. It comes in two forms . . . paste and liquid. The liquid (ready for the brush) is supplied in six colors — natural orange-red, light and dark brown, light and dark green, and black. The paste comes in natural orange-red and can be shaded to dark colors.

NATIONAL LEAD COMPANY

New York, 111 Broadway ▾ Buffalo, 116 Oak Street Chicago, 900 West 18th Street ▾ Cincinnati, 659 Freeman Ave. ▾ Cleveland, 820 West Superior Ave. ▾ St. Louis, 722 Chestnut St. ▾ San Francisco, 235 Montgomery St. ▾ Boston, National-Boston Lead Co., 800 Albany St. ▾ Pittsburgh, National Lead & Oil Co. of Pa., 316 Fourth Ave. ▾ Philadelphia, John T. Lewis & Bros. Co., Widener Bldg.

DUTCH BOY RED-LEAD

WELCOME NEWS TO CABLE TOOL DRILLERS!

The Lone Star Herald

LATE NEWS
Weather
Fair and Warmer

MONDAY, JUNE 17, 1929 THREE CENTS

VOL. 2—NO. 200

MANY OIL OPERATORS SAVING THOUSANDS OF DOLLARS WITH NEW KEROTEST HIGH PRESSURE OIL SAVER

SLEUTH SAVES MAN FROM MOB
Suspect, in Attack On

ACQUIT WOMAN IN MURDER CASE
Jury Frees Mrs. Barr,

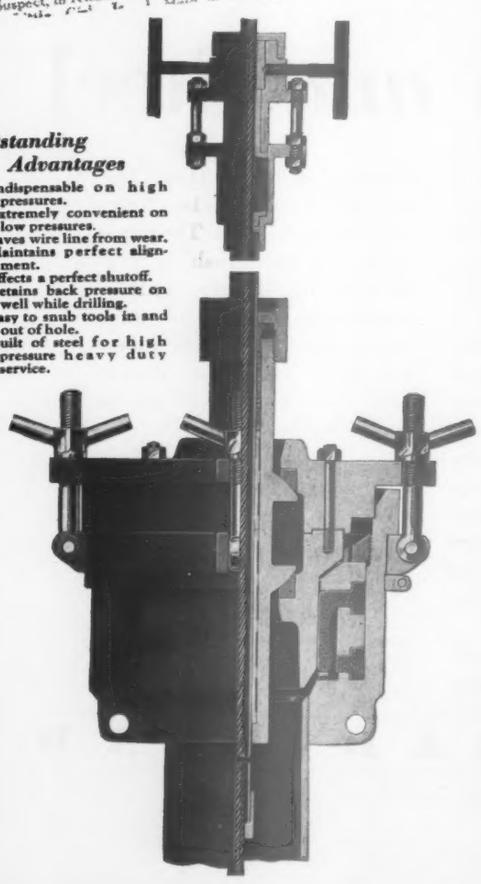
U. S. COMPILES CASUALTY LIST OF PROHIBITION

Demonstrates With Empty Gun, Kills Her Son

THREE KILLED AS WIRE FOULS CANADA PLANE

HEAT CLAIMS THIRD VICTIM
Boy Is Drowned In River Sand Hole

MEETS A LONG FELT NEED IN CABLE TOOL DRILLING



Outstanding Advantages

1. Indispensable on high pressures.
2. Extremely convenient on low pressures.
3. Saves wire line from wear.
4. Maintains perfect alignment.
5. Effects a perfect shutoff.
6. Retains back pressure on well while drilling.
7. Easy to snub tools in and out of hole.
8. Built of steel for high pressure heavy duty service.

Built Expressly for Drilling Under High Pressure Gas Conditions

THE Kerotest High Pressure Oil Saver is new—nothing else like it—It has been tried, tested and proved to be absolutely dependable under the most difficult pressure conditions—Many cable tool drillers in the West Texas and Canadian Oil Fields have already saved thousands of dollars with this remarkable Kerotest device.

The Kerotest High Pressure Oil Saver consists of a patented ball and socket forged steel swivel mounted in a cast steel main housing. The higher the pressure, the greater force is exerted to maintain a tight seat on the swivel joint. In addition, the swivel joint maintains the cable in perfect alignment at all times thus saving wire line from wear.

The housing is equipped with a specially designed oil resisting packing ring which permits the well pressure to be actuated behind the rubber packing ring. The result is that any increase in the oil or gas pressure automatically produces a greater pressure on the rubber packing ring.

Investigate the Kerotest High Pressure Oil Saver today—You will find it a boon to economical, efficient cable tool drilling. Descriptive literature sent upon request.

KEROTEST

Kerotest Manufacturing Co.
PITTSBURGH, PENNSYLVANIA

Franklin Valveless Oil and Gas Engines

Some of the Franklin OF Good Points

Enclosed type.
Simplicity.
Low fuel consumption.
No special tools required.
No special threads used.
Extremely heavy crank.
Counterbalance on crank.
Hollow crosshead pin fitted with crosshead on a taper.
Metallic Packing on piston rod.
Removable shells in all bearings.
Very accessible.
Steel crosshead with adjustable bronze shoes.
Piston rod flanged and bolted to piston.
Air cooled piston.
Cylinder head jacket easily cleaned.
Cylinder has three point force feed lubrication.
Most economical to operate in fuel, lubricant, water and repairs.
Easy starting.
Least number of parts.

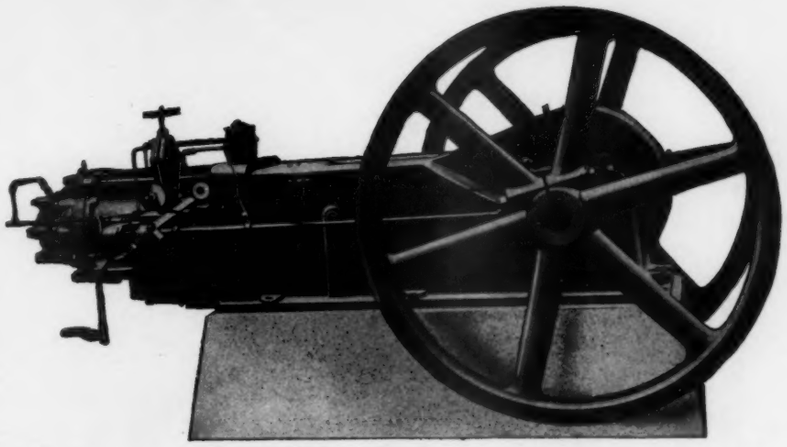
Type BG Clutch for Cable Tool Drilling or Pumping

A vast improvement over the former type of clutches.

Driven from pulley on engine. Permits the use of a larger diameter pulley and makes possible a slower clutch speed. Operates by hand lever on derrick.

Construction and design prevent Reverse Clutch Troubles.

PRICE—$1200.00 F.O.B. Franklin, Penna.



The A. P. I. Demanded Standardization Franklin Engines Give It

We believe standardization means economy—in both money and effort.

In the new and improved Franklin Oil Engine, identified as Type OF, each of its three sizes are made interchangeable as to foundation. Finish with the drilling engine—then move in the smaller pumper without changing so much as a bolt hole.

All Franklin Valveless 16″ stroke engines are interchangeable on the same block.

No loss of time, expense of new block or trouble. Practical economy for the operator—sufficient certainty to specify to the drilling contractor that he drill with a Franklin.

Even without this feature, advantageous as it is, the Franklin Valveless Engine stands as an achievement in performance, simplicity and economy. Operators who have seen this new type OF believe it to be an unusual advance in Internal Combustion Engines.

Where gas as fuel is available, specify Type OG. Incidentally, the OF Engine is readily converted into this OG type at very little trouble or expense.

Franklin Valveless Engine Company
Franklin, Penna.

PRICES

12 x 16 Type OF Franklin, including water circulating pump and pulley. *$1550 F.O.B. Franklin*

13 x 16 Type OF Franklin, including water circulating pump and pulley. *$2050 F.O.B. Franklin*

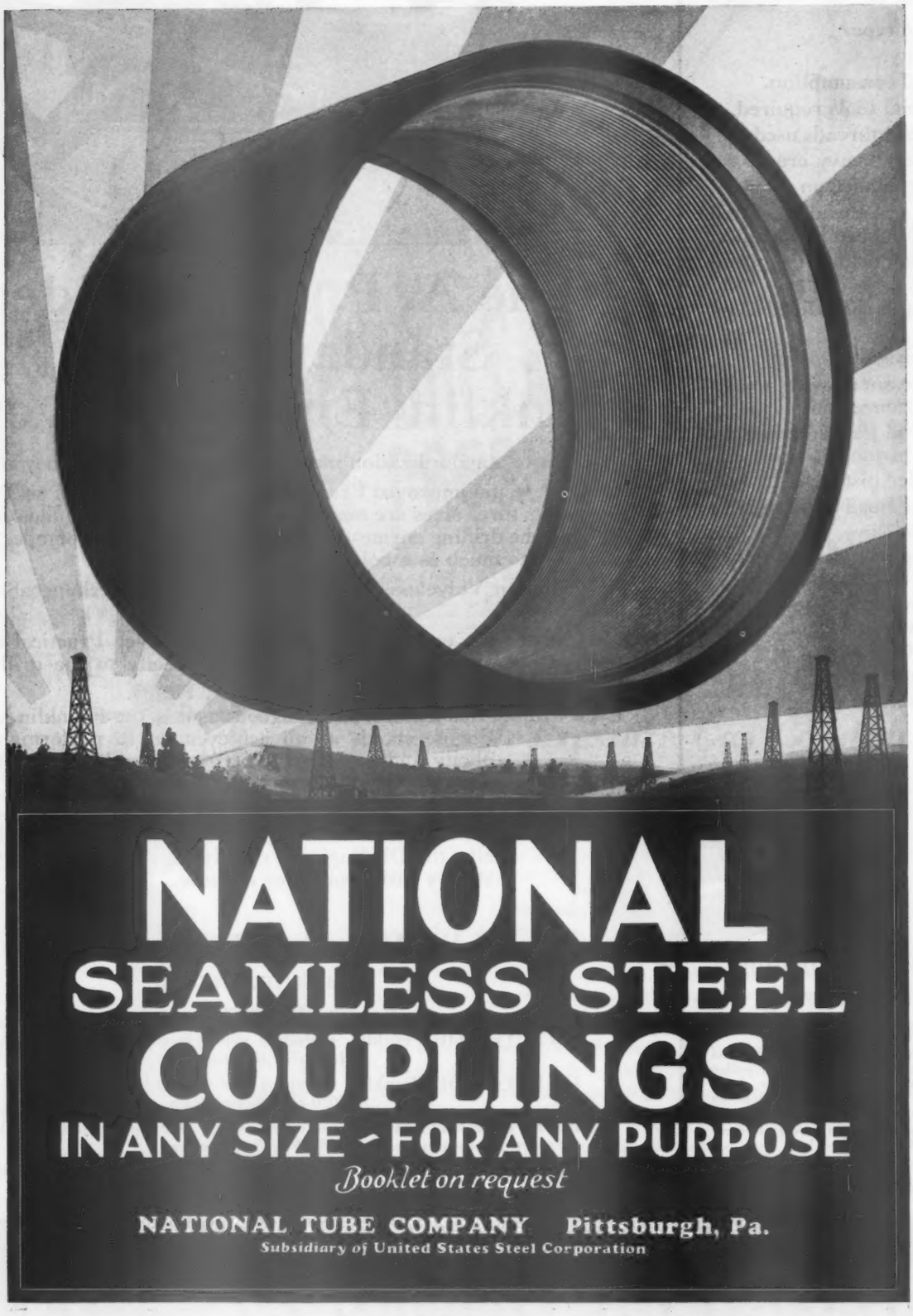
16 x 16 Type OF Franklin, including water circulating pump, pulley and air starting equipment. *$3200 F.O.B. Franklin*

NOTE—Type OF is readily converted into type OG for gas fuelization.

Distributed by

OIL WELL SUPPLY COMPANY

Branches in All Oil Fields


NATIONAL
SEAMLESS STEEL
COUPLINGS
IN ANY SIZE - FOR ANY PURPOSE
Booklet on request
NATIONAL TUBE COMPANY Pittsburgh, Pa.
Subsidiary of United States Steel Corporation

The most important date

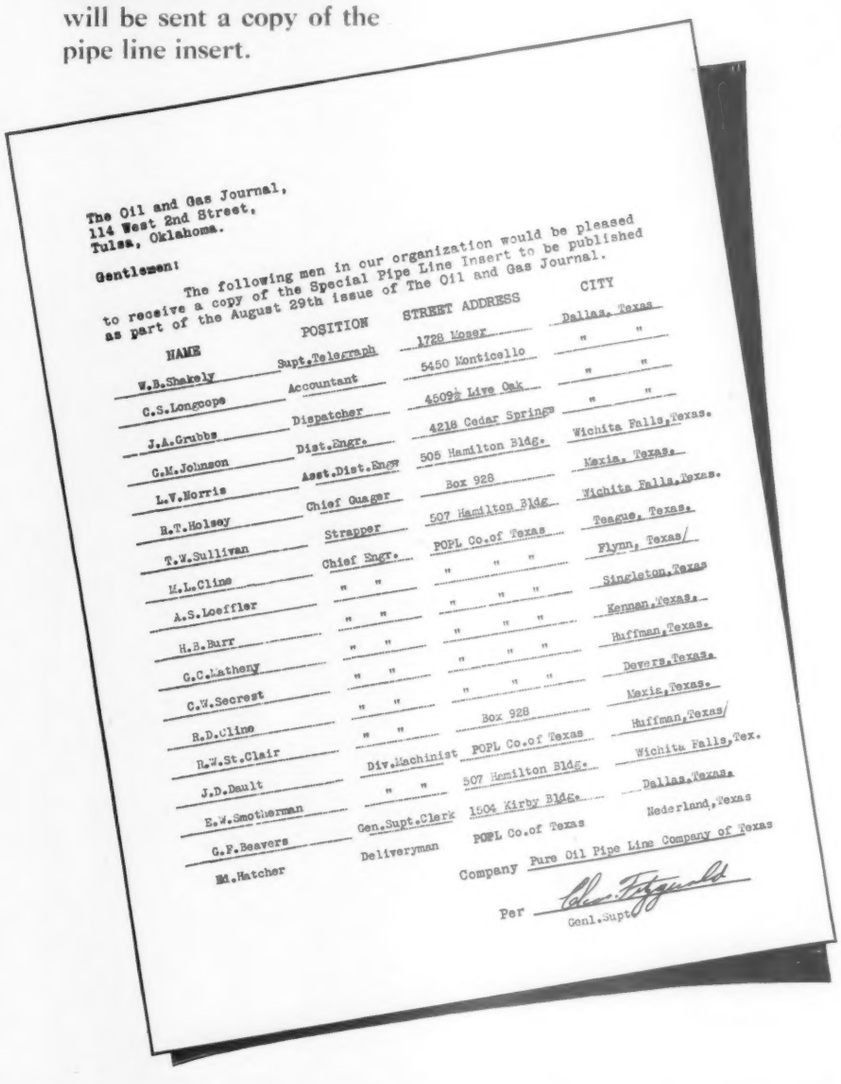
August 29th

in Pipe Line history!

The OIL and GA

will issue the *only* complete and up-to-he-
of the past 12 months, embracing repors o
of new methods; detailed maps of all oil an
to date; special technical articles prepard b

Type of lists now being secured from every oil and gas pipe line company. Every man on these lists not now a subscriber will be sent a copy of the pipe line insert.



The Oil and Gas Journal,
114 West 2nd Street,
Tulsa, Oklahoma.

Gentlemen:

The following men in our organization would be pleased to receive a copy of the Special Pipe Line Insert to be published as part of the August 29th issue of The Oil and Gas Journal.

NAME	POSITION	STREET ADDRESS	CITY
W.B.Shakely	Supt.Telegraph	1728 Moser	Dallas, Texas
C.S.Longcope	Accountant	5450 Monticello	" "
J.A.Grubbs	Dispatcher	4509½ Live Oak	" "
C.M.Johnson	Dist.Engr.	4218 Cedar Springs	" "
L.V.Norris	Asst.Dist.Engr	505 Hamilton Bldg.	Wichita Falls,Texas.
H.T.Holsey	Chief Guager	Box 928	Mexia, Texas.
T.W.Sullivan	Strapper	507 Hamilton Bldg	Wichita Falls,Texas.
M.L.Cline	Chief Engr.	POPL Co.of Texas	Teague, Texas.
A.S.Loeffler	" "	" " "	Flynn, Texas/
H.B.Burr	" "	" " "	Singleton,Texas
G.C.Lathery	" "	" " "	Kennan,Texas.
C.W.Secrest	" "	" " "	Huffman,Texas.
R.D.Cline	" "	" " "	Devers,Texas.
R.W.St.Clair	" "	Box 928	Mexia,Texas.
J.D.Dault	Div.Machinist	POPL Co.of Texas	Huffman,Texas/
E.W.Smotherman	" "	507 Hamilton Bldg.	Wichita Falls,Tex.
G.F.Beavers	Gen.Supt.Clerk	1504 Kirby Bldg.	Dallas,Texas.
M.Hatcher	Deliveryman	POPL Co.of Texas	Nederland,Texas

Company Pure Oil Pipe Line Company of Texas

Per Edwin Fitzgerald
Genl.Supt.

This tremendous market
vestment of $3,500,000,0
lines and $1,750,000,000
can be completely covere
which will contain over
line information and ma
000 was spent in constru
year, and at least as muc
ing the coming year by t
try. The great activity o
the extensive projects out
year, make August 29 th
line issue of all time.

ARRANGE NOW TO ADVE

EQUIPMENT TO THIS BIG

GAS JOURNAL

to-he-minute record of pipe line progress
ors on all new construction and description
oil and gas trunk lines; wall map brought up
ared by the leaders in the Industry.

narket, representing an in-
00,000 in crude oil trunk
0,000 in natural gas lines
overed in this special issue
n over 200 pages of pipe
nd maps. Over $300,000,-
onstruction during the past
much will be spent dur-
r by the Pipe Line Indus-
vity of the past year, and
ts outlined for the coming
29 the outstanding pipe
.

Company subscriptions are often read by more than one man in the company. In order that every individual may have his own copy of the special pipe line insert, lists such as these are being secured from all companies.

The Oil and Gas Journal,
114 West 2nd Street,
Tulsa, Oklahoma.

Gentlemen:

The following men in our organization would be pleased to receive a copy of the Special Pipe Line Insert to be published as part of the August 29th issue of The Oil and Gas Journal.

NAME	POSITION	STREET ADDRESS	CITY
M. Moran	President	Box 1012,	Tulsa, Okla.
J. K. McGoldrick	Supt.	Box 1012,	" "
H. L. Stewart	Secty-Treas.	"	" "
J. H. Cain	Dist. Foreman	Box 637	Seminole, Okla.
C. M. Shull	" "	Box 125	Durant, Okla.
J. J. Hanrahan	" "	Box 247,	Okmulgee, Okla.
L. E. Wilson	" "	Box 149	Durant, Okla.
W. H. Moran	" "	Box 1012,	Tulsa, Okla.
T. F. Reagan	" "	Box 1012,	Tulsa, Okla.
J. L. Culbertson	Civil Engineer	Box 1012	Tulsa, Okla.
W. A. Bohan	Chief Oil Dispatcher	Box 1012	Tulsa, Okla.
L. G. Moore	Tankage Foreman	Box 1006,	Kiefer, Okla.

Company The Texas Pipe Line Co. of Okla.

Per M. Moran, President. M. Moran

VERTISE YOUR PIPE LINE

G AND ACTIVE INDUSTRY

In the August 29th Issue of THE OIL and GAS JOURNAL

your advertising will reach the greatest number of pipe line men ever covered by any publication as we are arranging to send a copy of the insert, embodying all the editorial matter and advertising, to every man connected in any active capacity with every oil and gas line in the United States.

The lists are being secured from the heads of the various Pipe Line Companies and the special insert will receive an additional circulation of approximately 2,000 copies.

FOR COMPLETE DETAILS AND INFORMATION ADDRESS THE NEAREST ADVERTISING OFFICE

The OIL and GAS JOURNAL
PRODUCING REFINING ENGINEERING MARKETING
TULSA, OKLAHOMA

NEW YORK	PITTSBURGH, PA.	CHICAGO	LOS ANGELES
C. L. CAIN	A. E. LOEFFLER	L. AUSTIN de VORE	C. R. JOHNSON
101 PARK AVE.	STATE THEATRE BLDG.	PEOPLES GAS BLDG.	PETROLEUM SECURITIES BLDG.

It's what is back of the advertisement that counts

Back of this advertisement and the Pure Oil salesmen, back of the products which they sell, is a vast army of men—ready to serve you. Hundreds are working in Pure Oil's producing fields, others are operating its modern refineries. Some direct the movements of Pure Oil tank cars while some flash orders over private telegraph lines. *Every* operation from wells to you is ably controlled by The Pure Oil Company—your assurance of uniform quality . . . delivery on the dot!

Pure Oil is an independent company . . . and is successful because of unvarying high quality in all of its products,

Tune in on the PURE OIL BAND
Conducted by Edwin Franko Goldman
Every Tuesday Night over WJZ and chain

THE PURE OIL COMPANY

U. S. A.

Producers, Refiners, Marketers of a complete line of petroleum products

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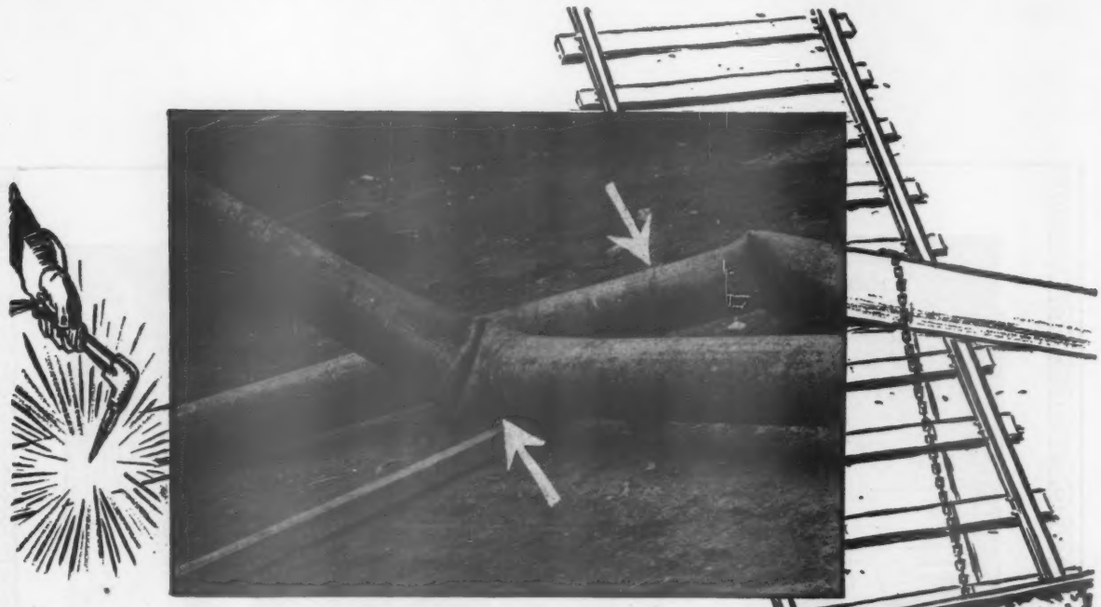

Chester Double Lengths Do Not Leak and Will Not Break Under Severest Tests

THESE pieces welded in double lengths were subjected to the following extreme tests:

The pieces were dropped several times from height of railroad car upon a rail. These tests in no way fractured or harmed the weld.

The pieces were anchored near the gas weld and a chain attached to a locomotive was secured near the end of the pipe. The locomotive pulled on the pipe distorting it as shown in the photograph near weld indicated by arrow. The weld remained intact.

No double length pipe can be stronger than Chester Double Length Pipe.

The field test of the long 10″ line from which these pieces were selected at random did not develop a single leak in the weld.

The careful inspection, crushing tests and final hydrostatic test after welding into double lengths insure 100% satisfaction in service.

Chester also makes all classes of Genuine Wrought Iron Tubular Goods.

South Chester Tube Company

CHESTER, PA.

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J. P. Steele, 305 Petroleum Bldg., Fort Worth, Texas

District Offices:

Tulsa, Oklahoma—J. D. Swartz, 247 West 13th St., Tulsa, Oklahoma
Houston, Texas—P. H. Selk, Jr., 2108 Mills St., Houston, Texas
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Bridgeport Machine Co., Wichita, Kansas and Branches throughout Kansas and Oklahoma.
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United Oil Well Supply Co., 712 A. G. Bartlett Bldg., Los Angeles, Calif.
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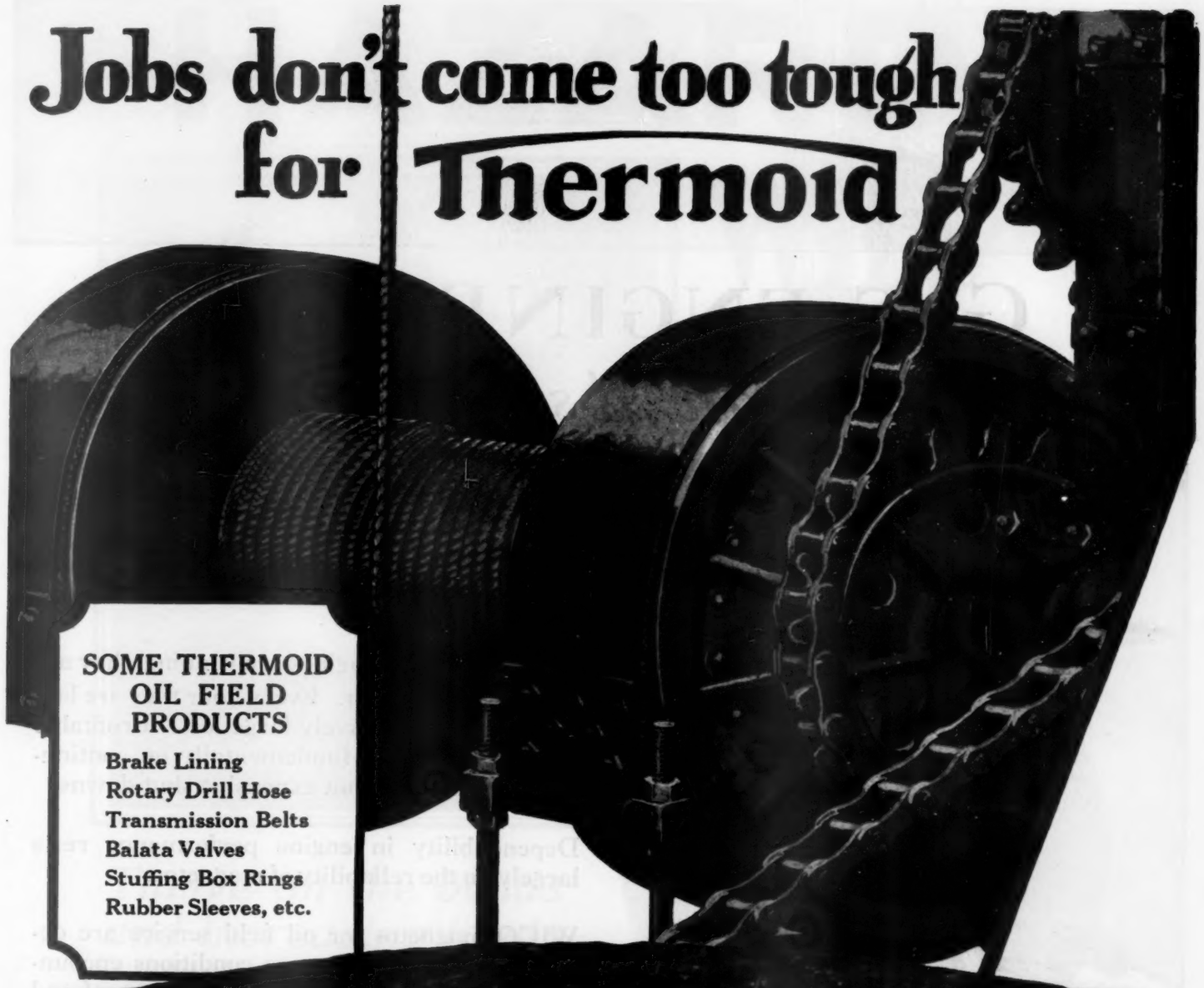
CHESTER

SPECIALISTS IN CASING FOR DEEP WELL DRILLING

STEEL CASING

LINE PIPE

Jobs don't come too tough for Thermoid



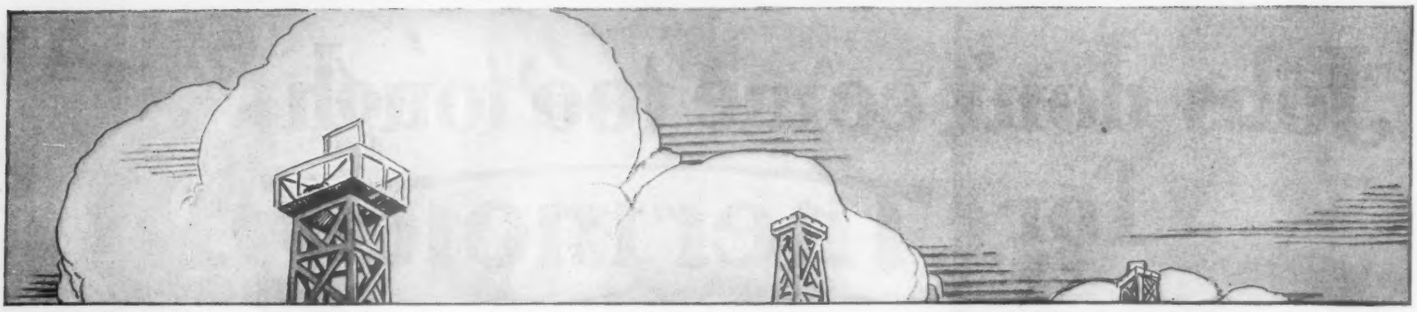
SOME THERMOID OIL FIELD PRODUCTS

Brake Lining
Rotary Drill Hose
Transmission Belts
Balata Valves
Stuffing Box Rings
Rubber Sleeves, etc.

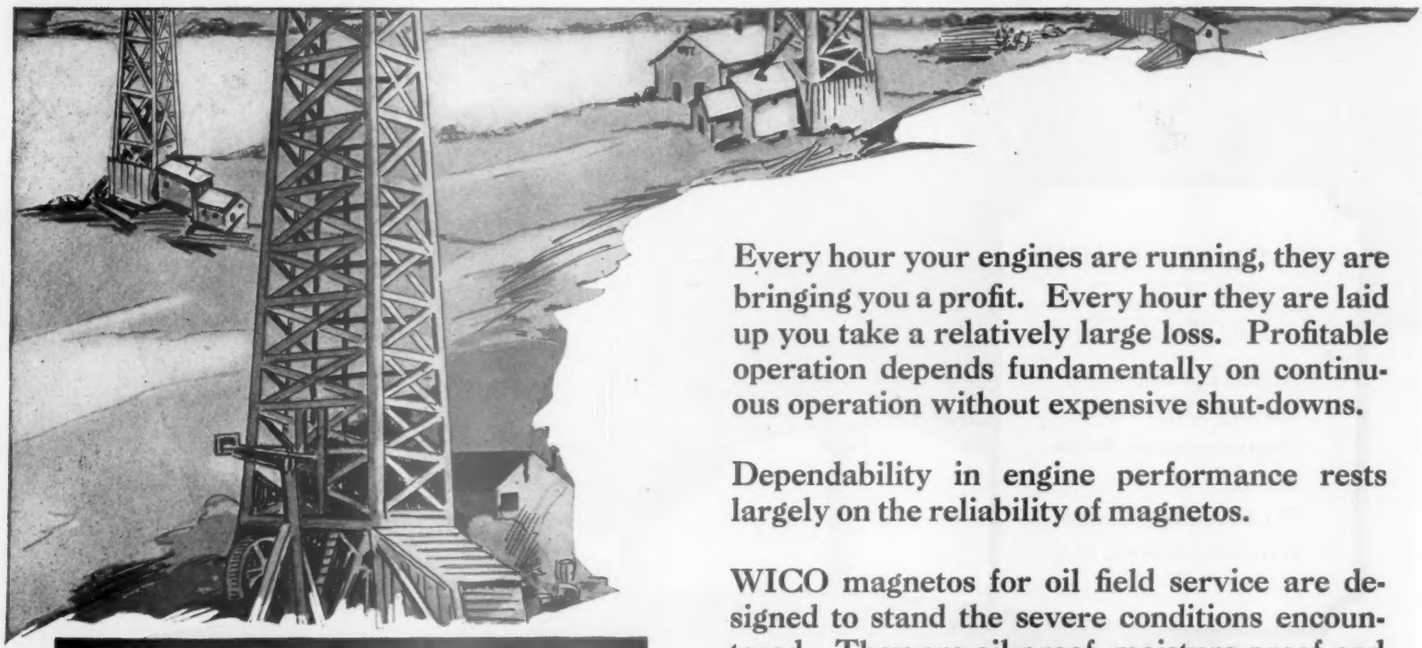
Thermoid

BRAKE LINING

THERMOID RUBBER COMPANY - *Factories and Main Offices* - TRENTON, N. J.



A GAS ENGINE *can be no better than its* MAGNETO



Every hour your engines are running, they are bringing you a profit. Every hour they are laid up you take a relatively large loss. Profitable operation depends fundamentally on continuous operation without expensive shut-downs.

Dependability in engine performance rests largely on the reliability of magnetos.

WICO magnetos for oil field service are designed to stand the severe conditions encountered. They are oil proof, moisture proof and dust proof. They are self-lubricating. WICO magnetos will operate continuously, day in and day out, with a minimum of attention.

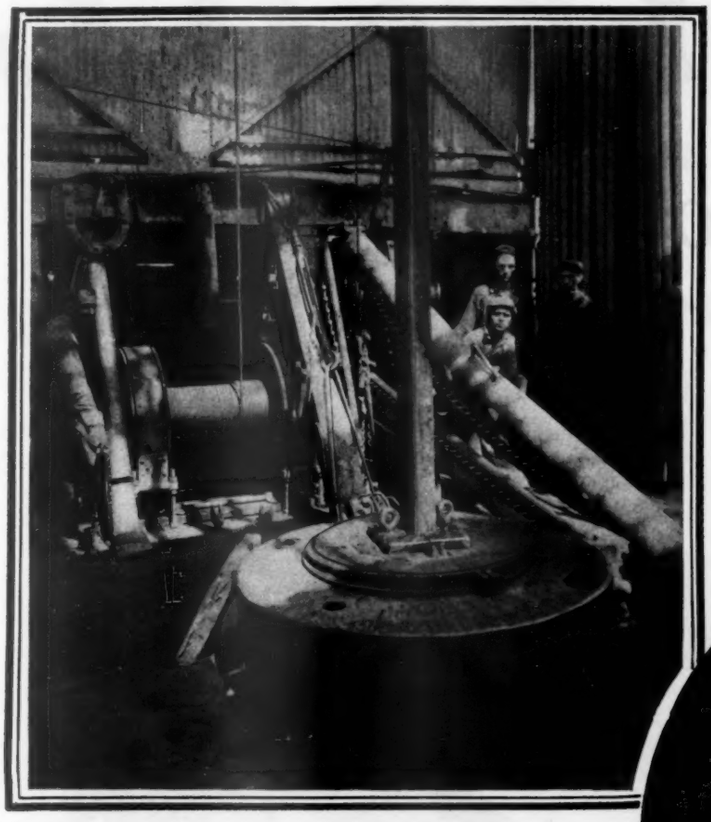
A trained organization of service representatives covers the oil fields. These men are at your call when needed.

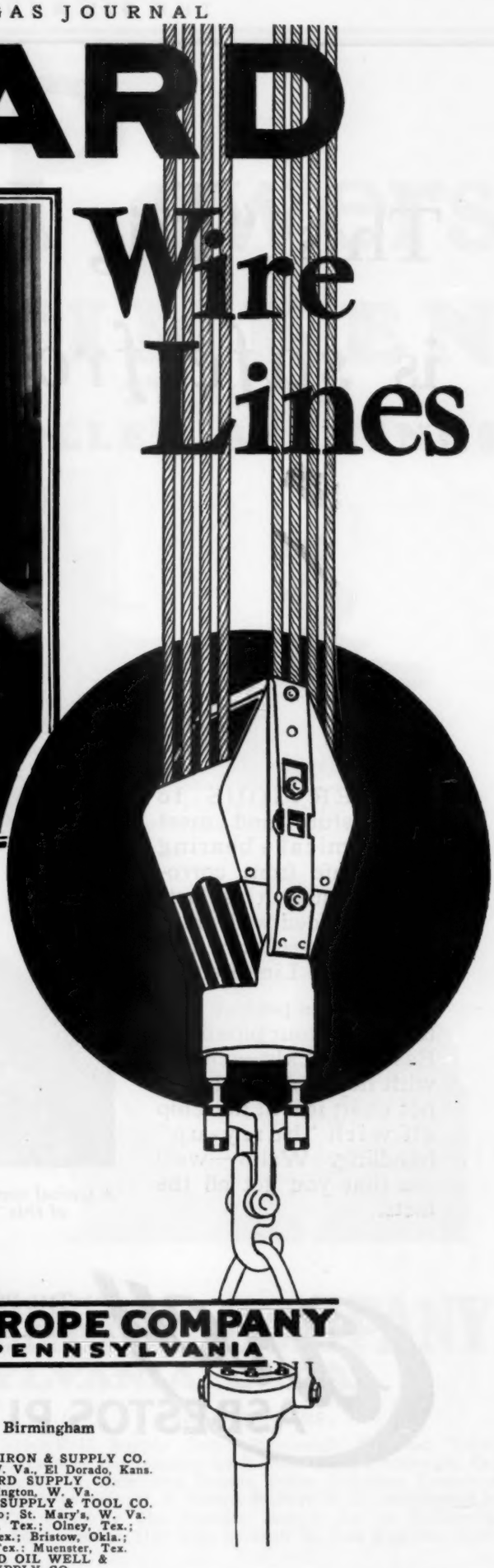
WICO dependability and WICO service account for the large number of engine builders who supply WICO magnetos as standard equipment.

FACTORY BRANCH
121 WEST 8th Street, TULSA, OKLA.

WICO ELECTRIC COMPANY
SPRINGFIELD, MASS.

HAZARD Wire Lines





Thrive on the bends and increasing loads of rotary drilling

EXTRA strength—and the ability to withstand constant bends without injury, are inherent qualities of Hazard Drilling lines.

Built especially for the increasing loads of rotary drilling, Hazard lines can be depended upon to return the utmost in rotary efficiency.

Let us send you complete information on the advantages of Hazard Wire lines for rotary drilling, and all other oil field requirements.

HAZARD WIRE ROPE COMPANY
WILKES-BARRE PENNSYLVANIA

1625 South Troost Ave., TULSA, OKLA.

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Graham, Tex.; Bristow, Okla.;
Coleman Tex.; Muenster, Tex.

UNITED OIL WELL & SUPPLY CO.
Los Angeles

This "Big Inch" gas line is *safe from corrosion*

A typical application of Carey Asbestos Pipe Line Felt—a section of this "Big Inch" Gas Line, near San Antonio, Texas.

IMPERVIOUS to moisture and most chemical-bearing soils. Safe from corrosion, because it is lastingly shielded with mineral armor—Carey Asbestos Pipe Line Felt.

Bond this perfect protection to your pipelines. Easily, quickly—cold or with hot asphalt. It will not char; it will not chip off with "hurry-up" handling. Write—we'll see that you get all the facts.

Special Industries Department
THE PHILIP CAREY CO., *Lockland,* Cincinnati, O.
R. B. HALL, Special Mid-Continent Representative
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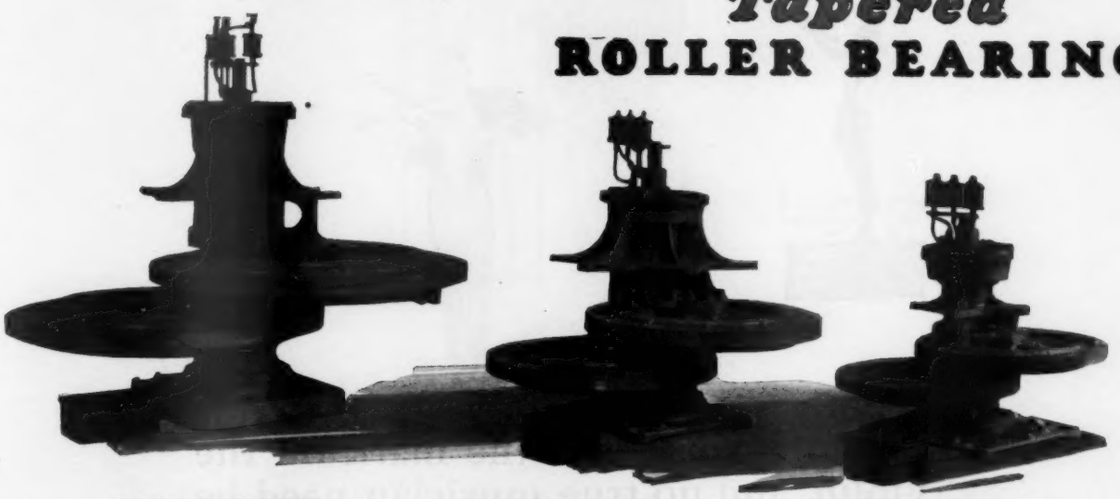
Carey
ASBESTOS PIPE LINE FELT

3 Reid Powers

Equipped with

TIMKEN
Tapered
ROLLER BEARINGS



PX POWER CENTER PF POWER CENTER PC POWER CENTER

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THESE powers combine time-tested features of Reid design with proven effectiveness of Timken Roller Bearings, resulting in practically eliminating friction in the center with consequent saving of power.

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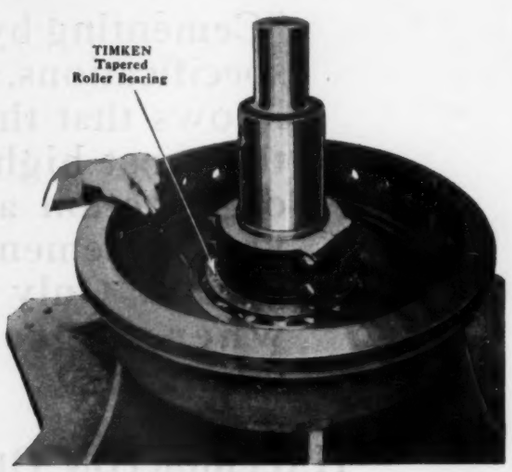

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The Oil and Gas Journal

PRODUCING REFINING ENGINEERING MARKETING

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Lack of Completions Causes Decline

Highest daily average estimated total production in 1928, week ended Dec. 29, 2,585,844 bbls. Lowest in 1928, May 19, 2,338,241 bbls.

Situation at Santa Fe Springs Last Week, However, No Criterion of Future. Enforcement of Gas Law Big Factor

By Andrew M. Rowley

Highest daily average estimated light oil production in 1928, week ended Dec. 29, 2,158,134 bbls. Lowest in 1928, Mar. 3, 1,927,713 bbls.

Lack of completions in the Santa Fe Springs Field in California during the past week accounted for the drop in production registered on the Pacific Coast and the resulting decline in the United States as a whole. However, there are 216 wells being drilled to the deep producing horizon at Santa Fe Springs, 67 of which are below 6,000 feet. Consequently, with many of these wells scheduled for completion during the next few weeks, the past week is no criterion of what may be expected from that area during the next couple of months.

The industry as a whole is intensely interested and vitally concerned as to what success will attend enforcement of the natural gas conservation law in California beginning August 31. If the oil companies will co operate to prevent natural gas waste and the state officials act to make the law effective, the situation throughout the country will be relieved very materially. Ineffective enforcement of the law undoubtedly would have an immediate adverse effect upon the situation throughout the whole country as the industry has been looking towards a curtailment of crude oil production in California when this law goes into effect.

The completion of a well in the Oklahoma City Pool in Oklahoma capable of making 20,000 barrels daily together with discoveries in widely separated sections of that State have depressed the crude oil market outlook in the Mid-Continent area. The trend of production in Oklahoma is upward and there is nothing to indicate this will change in the near future. With a slackening in the demand for crude, due to large stocks of gasoline in the hands of refiners, the crude market in the Mid-Continent is weakening further.

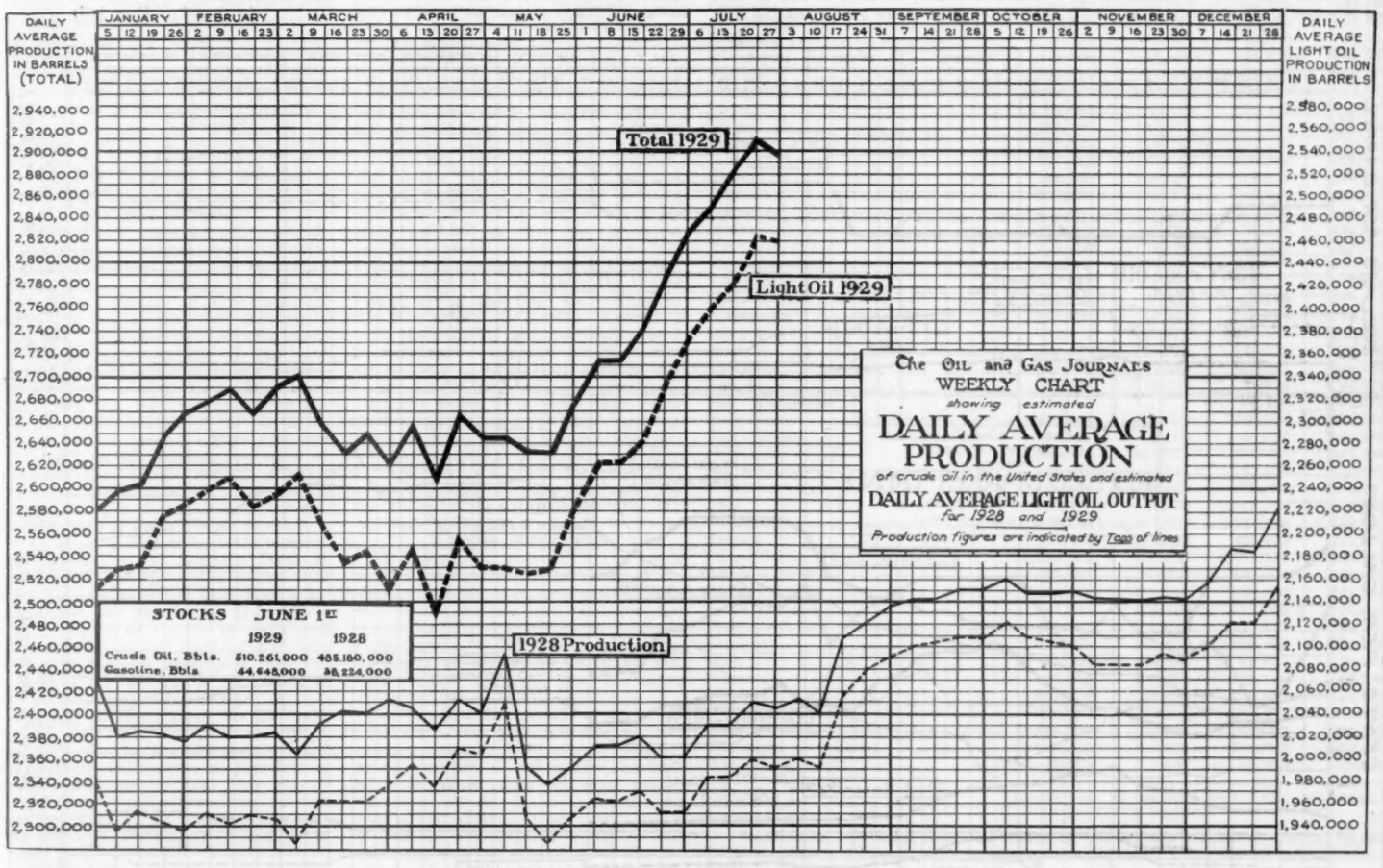
Everyone in the industry realizes too much crude is being brought to the surface but that fact does not seem to have any effect whatever on operations. New producing areas are being discovered and extensions to existing pools are of common occurrence.

PRODUCTION IN THE UNITED STATES

Estimated daily average production of light and heavy gravity oil in the United States for week ended July 27 and a comparison with the previous week follows:

	July 27		July 20	
	Light	Heavy	Light	Heavy
Oklahoma—				
Oklahoma City	24,715	.....	21,430	.....
St. Louis-Pearson	75,320	.....	73,445	.....
Seminole	303,630	.....	301,110	.....
Northern Miscellaneous	266,380	.....	265,125	.....
Southern Fields	56,120	.....	55,870	.....
Total Oklahoma	726,165	.....	716,980	.....
West Texas—				
Hendricks	139,962	.....	140,200	.....
Yates	139,798	.....	141,066	.....
Remainder	117,403	.....	117,423	.....
Total West Texas	397,163	.....	398,689	.....
North Louisiana	29,695	6,390	29,830	6,310
Arkansas	21,290	46,925	21,680	46,970
North Central Texas	148,300	.....	147,195	.....
Texas Panhandle	94,929	.....	90,373	.....
East Central Texas	19,220	.....	19,148	.....
Kansas	126,210	.....	124,575	.....
Total Mid-Continent Area	1,562,972	53,315	1,548,470	53,280
Gulf Coast	.....	147,416	.....	152,681
Southwest Texas	.....	76,253	.....	76,474
Eastern	123,000	.....	121,000	.....
Rocky Mountain Area	75,307	.....	73,888	.....
California—				
Santa Fe Springs	270,000	.....	295,000	.....
Long Beach	170,500	.....	171,000	.....
Huntington Beach	41,500	.....	41,750	.....
Elwood	28,000	.....	28,000	.....
Ventura Avenue	57,500	.....	58,500	.....
Seal Beach	48,000	.....	49,000	.....
Remainder of State	84,500	160,000	79,500	163,000
Total California	700,000	160,000	722,750	163,000
Total United States	2,461,279	436,984	2,466,108	445,435
Grand Total		2,898,263		2,911,543

→ **Total Decrease, 13,280 Bbls.; Light Oil Decrease, 4,829 Bbls.** ←



Minor Changes in Oklahoma Prices

Export Buying of High Gravity Gasolines in Mid-Continent Stops Decline. Distillate Demand Proves Heavy

By C. O. Willson

Compared to the three previous weeks the past few days in the Oklahoma (Group 3) market has been a period of steadiness in the refinery gasoline market. The placing of export business for the high gravity grades with Mid-Continent refiners totaling approximately 5,000,000 gallons coupled with an improved movement on domestic contracts were the factors of the week which served to at least temporarily strengthen a weak market situation.

Prices were also steady in practically all other products. Kerosene prices were shaded an additional one-eighth cent by a few Oklahoma refiners while other refiners reported a fair movement at the top of the market. The steady demand for the better grade of distillates continues and this has helped to prevent a further decline in kerosene prices. A number of refiners are reducing their kerosene yields to obtain larger yields of high gravity distillate. This product is being sold as high as 4 cents a gallon although the general market range for the 38-40 straw grade is 3¼ to 3½ cents.

The distillate demand is coming from the agricultural sections and jobbers who are buying to supply their winter demand for furnace oils. Sellers state the demand for distillate as tractor fuel is exceptionally heavy in the Middle West and Southwest including the rice areas. The relatively high kerosene tank wagon prices in these sections over the past few months is believed to have resulted in a substantial shift from kerosene to distillate as tractor fuel.

In the furnace oil end refiners report an increasing demand for August delivery. This demand was exceptionally heavy during June and July, a two-month period in which distillate business is usually exceptionally dull. The consuming season for this product does not start until September 1. One refinery sales manager states that the jobbers of furnace oils are storing exceptionally large quantities of furnace oils. It is believed to be due to the scarcity and high prices which invariably develops in this product after the first of the year when the winter consumption reaches the maximum point of the season. Last year this developed into an overnight demand with a price advance of 1 cent a gallon and in some cases jobbers were unable to keep sufficient supplies on hand.

Many jobbers are protecting themselves against a duplication of this situation by having sufficient storage on hand to tide them over a temporary shortage. The fact that the present spot price is under the average winter price makes the storage proposition attractive. Investment costs in distillate storage are relatively low with no evaporation losses to consider.

Export Buying

So far as known only one Oklahoma refiner shared in the export buying of the past week previously mentioned. The refiner sold 500,000 gallons of 390 endpoint gasoline. The rest of the business was placed with North Texas and Arkansas refiners who have lower freight rates to the Gulf Coast and for that reason obtain higher f.o.b. prices in their export sales.

The export buying served to remove some excess high gravity gasoline from the market and prevented that additional material being thrown on the domestic market. The business was placed by two companies. One large refining organization which is also a factor in the export market, purchased approximately 1,500,000 gallons of 375 endpoint gasoline from four North Texas refiners. The reported price was 7⅝ cents North Texas. The same company bought 750,000 gallons of 390 endpoint gasoline on a basis which averaged about 7⅝ cents f.o.b. North Texas.

The remaning business was placed by Tulsa brokerage concerns representing foreign buyers. This is classed as "independent" buying to distinguish it from the usual export channels which are affiliated with the Petroleum Exports Association, Inc. This purchase was for 400 endpoint gasoline. Approximately 2,500,000 gallons were purchased from two Arkansas refiners. The price paid was approximately 7¼ cents, Arkansas

(Continued on Page 143)

REFINED MARKET BAROMETER

The possibility that bunker fuel oil prices at the East Coast would be advanced due to high tanker rates from Gulf Coast, West Coast and South America was the most interesting development of the week in refined markets. The bunker oil market at the East Coast has been maintained at low levels for over a year but it is believed that an early advance will materialize due to the higher transportation charges from the main sources of supply. This advance if it materializes will aid the interior market which has been affected adversely by the low coastal prices. Refinery gasoline prices showed only minor changes over the past week except for the 1 cent reduction on the East Coast. Natural gasoline prices were also steady. A heavy retail consumption with the tourist demand in full swing was indicated in reports from all parts of the country. Kerosene prices indicated weakness in several areas. Steam refined cylinder stocks and bright stocks are weak in the eastern markets but the Mid-Continent market continues firm. Petroleum wax is soft with no improvement in prices.

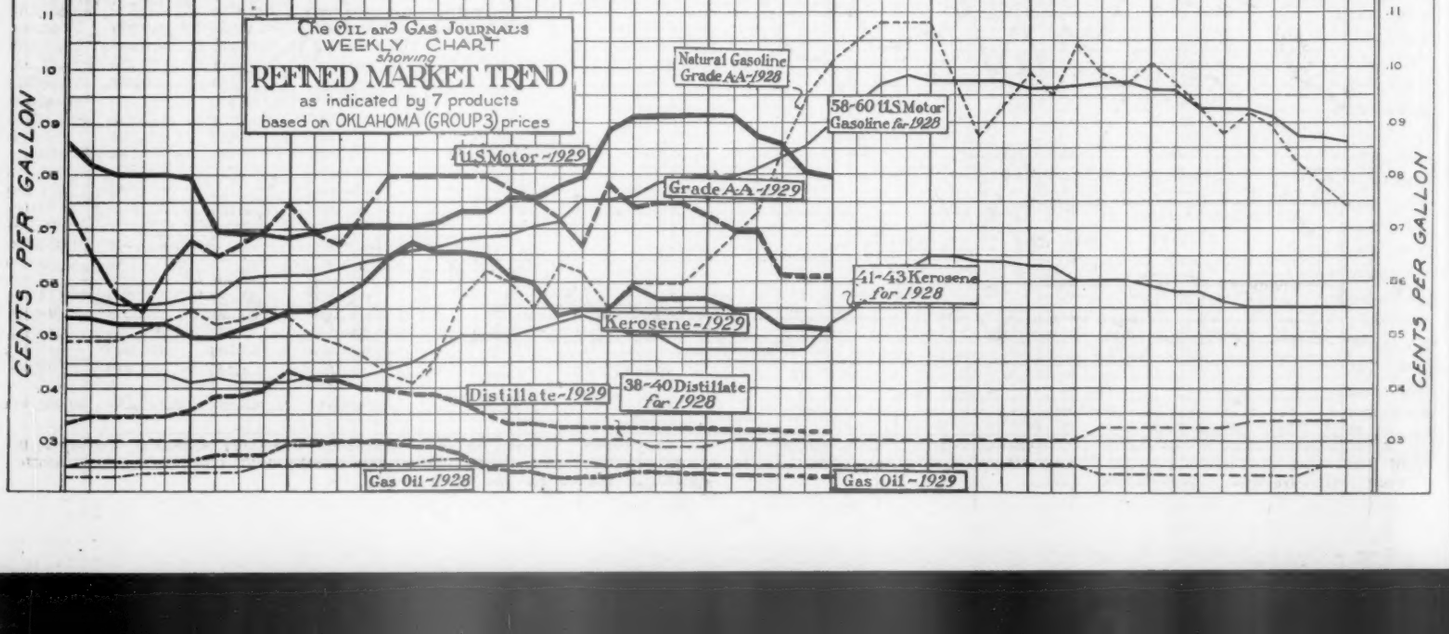
Mid-Continent—Export buying in several areas aids high gravity gasolines. Domestic grades reflect price weakness although contract movement is heavy. Natural gasolines unchanged with slow movement first of week. Distillates strong. Kerosene sluggish. No change in other products.

East Coast—Largest factor in refinery gasoline market reduces U. S. Motor price 1 cent meeting prices already established by competitors. No change in kerosene prices. Higher tanker rates may necessitate advance in bunker fuel oil prices which have not been changed for several months. Lubricating oil stocks reactionary.

Pennsylvania—Gasoline prices steady. Steam refined cylinder stock prices and some grades of bright stocks lower. Slow demand for paraffin wax. Fair demand for kerosene.

Chicago—Better movement of gasoline on contracts with no improvement in prices. Considerable distress material on tracks offered at low prices. Kerosene slow. Routine movement of fuel oil and gas oil. No change in other products.

Gulf Coast—Neutral oil movement slow. No change in gasoline prices. Prices on fuel oil and gas oil unchanged although demand slow.



Should Solve Its Own Problems-Wilbur

Secretary of the Interior States Oil Industry Should Put Into Effect Plan for Handling Overproduction

By Charles E. Kern
Washington Bureau, The Oil and Gas Journal

WASHINGTON, D. C., July 29.—"I am in full sympathy with the thought that the oil industry itself should solve the problem of conservation and put into effect plans for the orderly handling of the production of oil without any interference from Washington," said Secretary Ray Lyman Wilbur of the Department of the Interior and chairman of the Federal Oil Conservation Board, in reply to a question by the writer.

"The policy of the oil board has always been to present the facts and to have the industry cure its own ills. The oil board was created and it is now working to assist the industry in the interest of conservation but it has never desired a position of control and it only wishes to help those who are working to stop wastes of all varieties.

"It cannot be denied that back in the minds of many people there has been the belief that if the oil industry does not conduct its business in the interest of economic development for the benefit of the public at large and for its own benefit, somehow and somewhere there will inevitably come a demand that the great natural resources of oil and natural gas shall not be wasted.

"My own view of conservation has always been a policy to obtain the wisest use for our natural resources and has never been in favor of hoarding. That view has so often been expressed that it is not necessary to dwell upon it. It is difficult to conceive any contrary idea of conservation as a wise measure for all the people whether it concerns the automobile owner consuming gasoline or the oil company producing gasoline and other products for profit. We cannot avoid the fact that is now evident to everyone that wasteful methods are paid for by the consumer and that in the long run products will carry a cheaper price if careful attention is given to economy in their production.

Kettleman Hills

"We are now endeavoring to assist in bringing about a rational system of drilling and producing oil in the Kettleman Hills Field of California. Dr. George Otis Smith, director of the Geological Survey, is now in that field working to that end. Agreements have been made in two of the important oil structures there for the control of drilling operations and to prevent waste of natural gas. This will lead to recovery of the largest possible portion of the oil in the ground and at the same time keep the oil stored in its natural reservoirs of the earth until needed, instead of bringing it to the surface when not needed and placing it in storage at large expense, ultimately to be borne by the public.

"An effort is now being made to bring the operation of the Northern Dome in which the discovery well is located into a similar agreement and when that is accomplished the Kettleman Hills Field will no longer be a scene of waste and uneconomic business methods but will be a vast national asset to be fully developed in the interests of the owners of the oil and the public at large.

"In the Northern Dome the discovery well is wasting a sufficient amount of gas each day to provide the needs of all northern California. A pipe line is being constructed to take this gas to San Francisco and other cities. It has been impossible to get the gas under control although fortunately it has never caught fire.

"Offset wells are down near the oil sands. A plan which is being discussed is to have them blow to discovery in the hope they will relieve the gas pressure in the discovery well so that it can be brought under control. Plans are being made to carry the surplus gas to the nearby Coalinga Field in the hope that some of it can be stored there. A plan of prorating the produced gas and oil is now being considered by a special committee."

Public Domain Policy

When Secretary Wilbur's attention was called to the dissatisfaction of the Rocky Mountain States with the Department's oil policy for the closing of the public domain to oil exploration and exploitation he promptly replied:

"My statement made at Boise, Idaho, before the conference of Governors of several Western States answers that question as completely as it is possible for me to do at this time. It was then suggested that it is now time for a new public land policy which will include transferring to those states, willing to accept the responsibility, the control of the surface rights of all public lands not included in national parks or monuments or in the national forests. I then said that such a policy will need to be worked out so as to hold the oil, coal and mineral rights of public lands subject to some form of proper Federal prospecting law with development on a royalty basis of discoveries and with due consideration for conservation for the future.

"It should be remembered that the closing of the public domain was one of the first steps in the interests of the conservation of oil and it was taken promptly because that was one measure that the government at Washington

(Continued on Page 143)

Auto Registration Shows Gain

Increased Number of Passenger Cars and Trucks Reflected in Greater Consumption of Gasoline

There were 23,719,381 automobile passenger cars and motor trucks registered in the United States on July 1, an increase of 6.5 per cent or 1,455,439 cars and trucks over the first six months of last year, according to figures telegraphed The Oil and Gas Journal by the Secretaries of State and motor vehicle registration commissioners of the 48 States and the District of Columbia.

Should this same rate of gain continue during the remainder of this year, motor vehicle registration in the United States, exclusive of motorcycles, will for the first time pass the 26,000,000 mark and will approximate 26,092,500 passenger cars and trucks.

Seven states show a registration for the first half of the year of more than 1,000,000 cars each—California, Illinois, Michigan, New York, Ohio, Pennsylvania and Texas. New York had the greatest regisrtation with 1,600,088 passenger cars and 347,579 trucks, a total of 1,947,667 vehicles. California was a close second in total figures and was first in the registration of passenger cars, there being 1,737,961 of that type of motor vehicle registered in California on July 1 with 76,935 trucks, a total of 1,814,896.

Production of motor cars in the United States during the first six months of this year broke all previous records, a total of 3,411,451 cars and trucks being manufactured, while for the 12 months ending July 1, production of cars and trucks totaled 5,683,083, or practically 1,000,000 motor cars more than were manufactured during the best previous 12-month period. The best previous record was for the 12 months ending July 1, 1926, when the total was 4 665,925 motor cars manufactured. The total for the calendar year 1928 was 4,601,141 cars and trucks.

Gasoline Consumptoin

The increase in automobile and truck registration has been reflected in an exceptionally large increase in gasoline consumption so far this year. Gasoline tax reports for May from 36 states indicated a consumption of 764,010,000 gallons for the month, an increase of 85,907,000 gallons, or 12.8 per cent, over the same month in 1928.

For the first five months of this year these states, based on gasoline tax reports, consumed 3,073,947,000 gallons, which was 328,147,000 gallons, or 12.7 per cent greater than the same period last year. Early in the year it was thought that a 10 to 11 per cent increase in domestic consumption would be the maximum increase that could be expected.

Bureau of Mines data for the first five months reflect the same situation. The domestic demand for the first five months of this year, based on refinery shipments, totaled 139,009,000 bbls. This was an increase of 18,662,000 bbls., or 15.4 per cent over the same period last year.

AUTOMOBILE REGISTRATION IN UNITED STATES

State—	Passenger cars	Trucks	Ttl. first six mos., 1929	Ttl. first six mos., 1928
Alabama	.....	.....	*251,164	235,835
Arizona	85,446	12,895	98,341	77,722
Arkansas	157,446	29,829	187,275	182,331
California	1,737,961	76,935	1,814,896	1,688,553
Colorado	239,787	24,332	264,119	252,168
Connecticut	260,000	45,000	305,000	283,660
Delaware	40,509	8,577	49,086	46,406
District of Columbia	127.092	14,437	141,529	125,042
Florida	253,210	47,923	301,133	328,475
Georgia	275,038	41,827	316,865	284,993
Idaho	83,583	9,898	†98,482	92,471
Illinois	1,263,192	180,275	1,443,467	1,337,558
Indiana	682,702	111,217	793,919	759,336
Iowa	638,318	61,044	699,362	622,813
Kansas	449,766	60,607	510,373	470,746
Kentucky	258,876	29,009	287,885	269,954
Louisiana	217,000	38,000	255,000	219,249
Maine	131,482	26,633	158,115	138,595
Maryland	273.254	21,596	294,850	283,074
Massachusetts	695,880	94,700	790,580	735,624
Michigan	1,106,760	156,971	1,263,731	1,116,842
Minnesota	573,913	90,516	664.429	619,268
Mississippi	191,702	27,211	218,913	213,189
Missouri	581,340	70,675	†709,162	665,880
Montana	103,422	21,835	125,257	112,600
Nebraska	323,253	30,614	353,867	418,060
Nevada	20,980	5,534	26,514	23,216
New Hampshire	.....	.....	*98,540	92,183
New Jersey	617,468	132,039	749,507	687,248
New Mexico	66.877	2,100	68.977	60,103
New York	1,600,088	347,579	1,947,667	1,862,960
North Carolina	384,053	43,371	427,424	433,000
North Dakota	148,486	22,480	170,966	156,161
Ohio	1,317,847	164,369	†1,668,352	1,566,528
Oklahoma	405,531	47,538	†484.718	455,134
Oregon	207,489	18,804	226,293	212,474
Pennsylvania	1,383,302	209,484	1,592,786	1,495,267
Rhode Island	100,464	18,339	118.803	111,894
South Carolina	.....	.....	*203,926	191,480
South Dakota	161,923	19,139	181,062	170,017
Tennessee	296,545	27,082	323,627	289,924
Texas	1,000,000	150,000	1,150,000	1,055,160
Utah	85,560	14,300	99,860	90,260
Vermont	72,333	7,406	79,739	72,793
Virginia	286,079	48,223	334,302	314,477
Washington	326,080	58,565	384,645	377,493
West Virginia	195,000	24,600	219,600	212,418
Wisconsin	619,382	92,621	712,003	663,403
Wyoming	46,125	7,145	53,270	49,906
Total	‡20,092,544	‡2,793,274	23,719,381	22,263,942

*Estimated. ‡Partial totals as indicated. †Partially estimated: Idaho, 93,481 for five months; Missouri, 652,015 for five month; Ohio, 1,482,216 for four months; Oklahoma, 453,000 for five months.

Russian Oil Men Describe Methods

Chairman of Soviet Oil Trust Making Tour of American Fields Tells of Operations in Soviet Oil Regions

By L. G. E. Bignell
Petroleum Engineering Editor

Russia as a country is quite unknown to the average American, unless he has been fortunate enough to have had the opportunity to have traveled and lived in it, and as to its resources and possibilities for commercial, industrial and agricultural development few people outside of the country know or conceive of them.

The Journal, therefore, considers itself quite fortunate in being able to present herewith a somewhat detailed report of an interview with M. V. Barinov, chairman of the board of directors of the Government Oil Trust, "Azneft," with headquarters at Baku, in the Union of Socialist Soviet Republics, who is making a tour of American oil fields with a number of his technical advisors.

The interview was made possible by the interpretation of A. G. Fichson, assistant manager of the electrical department of Amtorg Trading Corp. of New York City, together with L. L. Tiferis, chief engineer of pumping production for the Azneft Co., who has been in this country for some time and is becoming quite well acquainted with American customs.

The party is made up of the following members from the Azneft Co., who are accompanying Mr. Barinov: F. B. Russambekoff, chief technical director; Professor M. V. Abramovitch, chief geologist, and M. Schachnazaroff, chief engineer of natural gas and gasoline plants, and the Grosneft company officials in the party are T. P. Chamroff, vice president; S. Chambekoff, refinery engineer, and L. Arutunoff, drilling engineer.

Two Major Companies

It will be noted that there are officials here from the two major government oil trusts, the Azneft and the Grosneft, and these divisions get their names from the districts in which the oil producing areas are located.

By referring to a map of U.S.S.R. (former Russia) it will be noted that the southern boundaries of the country are formed by the Caspian and Black Seas with the Caucasus Mountains forming a connecting link for the greater portion of the distance between these seas.

The principal oil fields are scattered around the shores of these two bodies of water, and apparently the uplifting of the Caucasus Mountains has had its effect on the formation of these oil fields, which at Baku are anticlinal folds of great thickness, and the producing horizons are in the Pliocene and Miocene period, and are therefore of much younger geological age than the fields of this country.

Identification of the geological age has been made by fossil evidence consisting of many types of marine life, including some fossil fishes of some considerable size. In the Caucasus Mountains it is stated that Miocene beds occur up to heights of 2,000 meters, approximately 6,560 feet, so the geological cross section represented by this age of sedimentation must be over 10,000 feet in thickness, for it is stated that the thickness in the Baku fields is about 4,900 feet.

There are a number of old fields in U.S.S.R, and the names of the principal ones are Baku, Grosny, Emba, Fergana, Usbek and Maikop, and the Island of Sakhalin in the Pacific Ocean, north of Japan.

Newer Fields

Of the newer fields there are the Ural Mountain district, opened in April, 1929; Crimea, Kuban, Ukha, the Volga district and Berekay in Daghestan (North Caucasus).

These fields are scattered over a large part of southern U.S.S.R., but those of most importance and the best known are the Baku and Grosny districts, situated on the eastern shores of the Caspian Sea.

Baku, the older of these two fields, is located upon a giant anticline on a peninsula known as the Apsheron, and has outcropped and the outcroppings are covered over with wind-blown sand until it was again buried.

Seepage from this outcrop has so saturated this loose sand as to cause it to become cemented with the heavy asphalt fractions of the oil, which as produced in the wells has a specific gravity of .789 to .930, or from 49.91 to 20.65 A.P.I. degrees. The lighter oil occurs in the upper part of the structure, and the deeper the well is drilled into it the heavier the grade of the production.

Measured across the outcropping this Baku producing zone has been found to be 4,200 feet, and the well depths range from 1,500 to 3,500 feet.

The sands are lenticular in character and some 35 in number, counted in the vertical column, and the Baku area is divided into a number of pools due to this lenticular sand condition.

At Grosny, which is situated 300 miles north of Baku and south of the mouth of the Volga River, the anticlinal type of structure is also found, but there are only 21 producing sand zones, and the uppermost stratum is about 400 feet under the surface, while the thickness of the producing sand horizon is about 4,500 feet, but the average well depth is only about 3,500 feet.

This oil is of a paraffin base and has a specific gravity of .860, or about 33 A.P.I. degrees. It is produced with but little gas, but the gas that does accompany the oil has a high gasoline content, while at Baku there is an enormous gas output but it is very nearly a dry gas. More will be said later about the character of the gas at these two fields.

Drilling Methods

The drilling methods in both fields are quite similar except for finishing the wells, for at Baku the gas pressure at the surface, or well head, averages about 750 pounds per square inch, while at Grosny it has a pressure of only 15 pounds.

The rotary type of drilling outfit is largely used in both fields, and it is stated that 84 per cent of all holes drilled in Russian fields in 1928 was by the rotary method.

Where the hole is started with cable tools it is finished by the same method, but it is also true that where they start drilling with rotary they will finish by that method. This can be readily understood, for at Baku they have pressures at the sands of approximately 1,500 pounds, and cable tools are blown out of the holes and wells come in out of control, and once in this condition it is almost impossible to shut them in, for the sand is very loose and accompanies the oil in great quantities, in fact, it was not uncommon in the days of older drilling methods to have a well run wild and produce sand and oil until the derrick was buried and the well shut itself in.

The method now used in drilling at Baku is to load the hole with heavy mud, that is, mud to which barite or calcium has been added, and by careful manipulation it is possible to drill into the producing sands the necessary distance and then bail the well in. Sometimes the well will blow itself free of mud, but with the more modern Russian practices this does not often happen.

The hole is cased with 8-inch casing and a 4-inch liner run inside of the casing, with perforations opposite the sand body. This 4-inch liner is carried through a bradenhead at the top of the well and then to a tee to whch is attached a 4-inch pipe, and the pipe fitted with a half-inch "bean."

This method of finishing a well at Baku has given them a means of controlling the amount of sand that is produced with the oil and holding it to a minimum at the same time the maximum production desired is obtained.

At Grosny the conditions at the sand are not the same, and their wells are produced by natural methods or pumped by electricity and give little trouble.

Electric Power

Electricity is used for nearly all drilling operations in the Russian fields today, and this is particularly true of Baku and Grosny, for there are two plants at Baku capable of producing from 100,000 to 120,000 kilowatts, and at Grosny there is one 20,000 kilowatt plant. All plants are of the steam turbine type and very modern.

In drilling rotary holes a 100 horsepower motor is used for both drawworks and turntable, and by the Russian system the control is simplified over that of the best known system used in this country, and the desired power for the drilling operation is regulated by an auxiliary motor of but 15 horsepower. This system has been worked out by Russian engineers and is well suited to their drilling conditions.

If cable tools are used the American type 15-35 hp. variable speed motors are used and for pumping electric motors of from 5 to 10 hp. are placed at the wells.

For cleaning out and pulling the wells some motors mounted upon trucks and caterpillar tractors are used, but the most general method is to employ the winch mounted upon a tractor as in the fields of this country.

American drilling tools are largely

Well No. 223 on parcel (lease) No. 14 in the Bibi-Eibat Bay (reclaimed area) of the Baku fields flowing open on May 6, 1929.

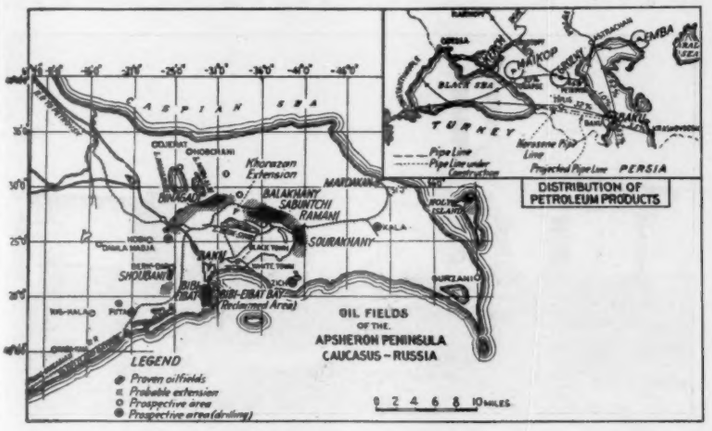
Well No. 223 in Bibi-Eibat Bay extension to the Baku Field on May 8, 1929, after wrecking derrick.

used in the Russian fields and several millions of dollars are spent each year in this country for this type of equipment and supplies. The electric motors are of the General Electric and Westinghouse type with some Wagners, and the turbines and power plant equipment is also all American.

Production Methods

The usual method of handling production as it leaves the wells, in the Baku and Grosny districts, is to flow into the usual type of oil and gas separators and the gas is sent to the gasoline plants while the oil goes to small lease storage and then to tanks of about 12,000 bbls. capacity and from those tanks to the pipe line and the large 55,000-bbl. tanks.

The small 100-bbl. welded tanks at the individual wells are placed in accordance with the well's capacity, and the 12,000-bbl. tanks which receive the oil from the



Map of the Baku district, U.S.S.R.

100-bbl. tanks are grouped in batteries of four and connected with the pipe lines.

In Grosny the gas is so wet that it is a common practice to run the gas line down the hill from the well and provide a condensing coil at the lower end of the line, and in this way a very considerable amount of drip gasoline is obtained.

The gas at Grosny averages 4.5 gallons per thousand cubic feet and it has been sampled with a gasoline content as high as 16 gallons. At Grosny there is the first unit of a large gasoline plant and about 500,000 bbls. of gasoline (2,100,000 gallons) was made last year. The plant is being increased and the compression method is used and the design is along the lines of the best American practice. They also have two portable gasoline plants purchased in the United States in operation.

At Baku, on the other hand, the gas is very dry having an average content of only about .4 gallon per thousand, and a maximum of about one gallon, but they have three large plants there because their gas volume is very large. There are also a number of smaller units in the different pools and what this gas lacks in richness it makes up in quantity.

Pipe Lines

The pipe lines in Russia run from Baku on the Caspian Sea to Batum on the Black Sea where the ships have outlet to the Mediterranean Sea as a good many of the finished products are shipped to England, Germany and France and the near Orient, Turkey.

This line consists of two units, one of 8-inch and the other of 10-inch and is about 600 miles long. The line is divided into an equal number of pump stations and each station equipped with three Diesel type engines of 300 hp. each, and three pumps. This is a standard method of handling oil in all Russian lines.

The oil from Grosny finds its outlet through a line about 430 miles long from the field to the port of Touapse on the Black Sea. It is being proposed to lay pipe lines to Rostoff and Moscow from the Grosny Field.

The Emba Field at the north end of the Caspian Sea is finding its outlet by tanker and a new line is being laid to Samara to the north.

There is a short line of about 100 miles from Grosny to Petrovsk on the Caspian Sea, where oil is loaded into tankers and delivered to the large refineries at Astrakhan, Yaroslav and Nijmy Novgorod.

Distribution of the finished products from this refinery is made by tanker and tank car, the tanker being for the most part government owned and operating on the Caspian Sea and is transferred to river boats for the trip up the Volga river for a considerable distance, while other tank ships owned by individual companies and the Government carry the oil to foreign ports.

New Field in Urals

It will be noted that most of the discussion has been limited to the Baku and Grosny Fields, and they are the most important for they produce about 185,000 bbls. per day at Baku and half that amount at Grosny, while all the other fields do not produce to exceed 5,000,000 bbls. per year.

However, there is a new field opened May 14 of this year in the Ural mountains 30 miles east northeast of Perm, a city about 10 hours' ride to the east and a little north of Moscow, which promises to be of considerable importance.

The discovery of this field was in a way accidental, as they were prospecting for potassium salts and trying to open up beds of that material suitable for treatment to make a fertilizer of the calcium phosphate type much needed in agricultural use, when the drill opened up this new pool at a depth of about 1,050 feet.

This well is finished at a total depth of 1,080 feet, and at 1,070 feet was in massive gypsum that graded into anhydrite and was tentatively placed by paleontological examination as being in the upper Carboniferous age (Pennsylvania).

The well made one flow of about 15 bbls. and the heavy oil had a very strong gas flow with it and this gas had the characteristic odor of hydrogen sulphide.

The oil is apparently coming from the base of the anhydrite where a dark gray cherty limestone was found and this material probably represents a major unconformity and is somewhat similar to the "Big Lime" of the West Texas Permian Basin area in this country.

The extent of this Perm area is very large and represents the remnants of a vast sea which once connected the Arctic Ocean and the Caspian Sea. It is probable that production will be found in this area from the basal Permian, from the Carboniferous and from the Devonian formations, and if this proves true the basin of the Ural-Volga region may eventually be one of the largest producing areas in the world.

Important Discovery

The importance of this discovery is shown by the itnerview reported in New York papers upon the arrival of Theodore Chamroff, vice president of the Grosneft company, the second largest oil producing organization in U. S. S. R., which is quoted in part below:

"The discovery of oil in the Central Urals opens up the possibility of further discoveries in the contiguous sections of the country. The importance of this discovery for the development of the metallurgical and other industries of the Urals, which heretofore have been somewhat hindered by the difficulties in regard to fuel supply, can be hardly overestimated. The new oil field is located near the Kama River, a tributary of the Volga River, and the transportation problem will be therefore comparatively simple.

"The Urals oil is shown by laboratory analyses to yield nearly 50 per cent of gasoline-kerosene and has superior detonating qualities. The residue can be very well utilized for the production of asphalt."

There is only one well drilled in the district in the Ural Mountains up to this time but the area will be developed further by five new tests this summer and from a study of the geology of the area seems to hold forth much promise of being a large field.

The district in which the oil has been found is one in which there is considerable mining activity and many precious and commercial metals such as gold, platinum, copper, iron and lead are found. The district is heavily wooded and the forests well stocked with big game such as brown bears and deer, and there is also good hunting for geese, ducks and pheasants.

Living Conditions

These oil fields are all government owned and operated and working conditions are very good for the trusts are building American type cottages for their workmen and equipping them with electricity, gas and water. They are furnished without rental to the employes, and each town or camp has its own hospital, public buildings and schools.

In the past five years the Trust has spent 30 millions of rubles ($15,000,000 U. S. currency) at Baku alone for improvements of this kind, and at Grosny about 14 millions of rubles ($7,000,000 U. S. currency). The work is still going forward.

All wages are paid monthly, or on a monthly basis, and the month consists of 24 working days of 8 hours each for all field workers and days of 6 hours each for office workers.

Drilling is done in 8-hour shifts and all employes have at least 42 consecutive rest hours per week, which requires that one extra shift of men be in reserve at all times. The vacation periods are from two weeks to one and one-half months with pay.

At the present time there are about 30 per cent of the workers on the 7-hour day plan and within two years 100 per cent of all employes will be working on the 7-hour day basis.

The topographical conditions around Baku are somewhat similar to West Texas, that is sandy, but at Grosny it is wooded and quite green.

The climate at Baku is very similar to that of Southern California while at Grosny it never gets colder than 4 degrees Fahrenheit below zero, but in the Ural Mountains it is very cold and there is much snow in the winter.

Turbo-Rotary Equipment

The technical engineers for the various departments of the Oil Trust have made some very notable improvements in many operations and have applied methods used in other countries to the peculiar conditions that have been found in Russian Fields, but it is doubtful if there is any more notable example of their ingenuity than the development of the turbo-rotary drilling equipment.

This consists primarily of a turbine operated fish tail or rock bit, the turbine being placed at the bottom of a string of drill pipe and the mud fluid forced down the inside of the pipe and through the turbine.

The turbine is encased in a steel jacket in such a way that it alone turns and rotates the bit, while the drill pipe and turbine jacket remain stationary.

The work to be done by the turbine is regulated by the pressure applied to the column of mud in the drill pipe by the pumps and is in most cases constant as the formations to be cut do not vary greatly in texture.

This system eliminates all turntables and their chain drives from the outfit, and because the drill pipe is stationary and only the drill moves it is claimed it drills holes very straight.

The size of the hole to be drilled is determined by the size of the turbine and bit selected and a hole may be varied in size as it is deepened the same as by any other drilling method.

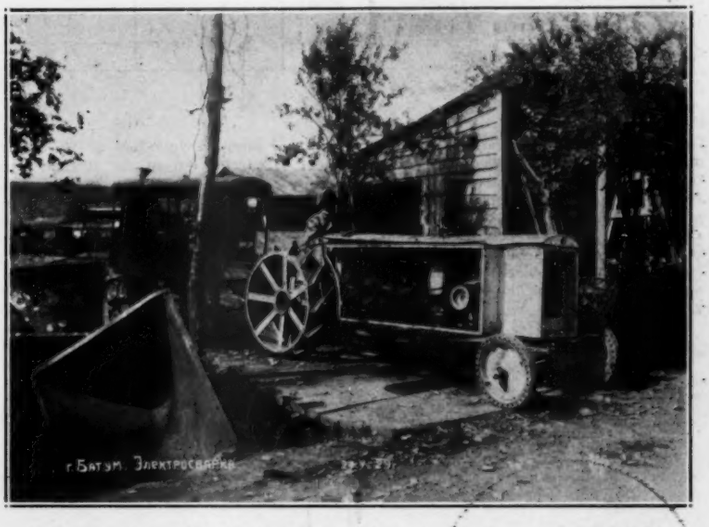
As the bit alone turns in the hole and the mud laden fluid is forced through the turbine cups under high pressure and escapes to the hole through openings in the bit as in the ordinary type of rotary equipment, all force from the high velocity of fluid is spent at the face of the bit and its rotation tends to mud up the walls of the hole in a satisfactory manner.

Caving of the hole has not been noted to any serious degree for the velocity of the upward current of fluid is relatively slow as the size of the drill pipe used is much smaller than the diameter of the hole being drilled, so velocity drops materially as the fluid enters the open hole as the drill advances.

The idea is comparatively new and only about 15 holes were drilled by this method last year, and there are 25 scheduled for drilling in 1929, but its use has been extensive enough to determine its value and it is predicted that the method is capable of a very general application to drilling in all fields.

In the experimental work depths of only from 1,500 to 2,000 feet have been drilled but there seems to be no reason why the depth should be limited and

(Continued on Page 139)



American made portable electric welding outfit used in the Batum refinery, U.S.S.R.

Process Reclaims Tank Bottom B. S.

Plant Erected by Humble Oil & Refining Co. for Treating Accumulations Reduces Cost of Oil Recovery to 9 Cents a Bbl.

By W. T. Doherty*

Tank bottoms offer a difficult problem with all oil companies. The greatest benefits can be obtained by perfecting an economical method of dehydrating and cleaning the oil of all foreign matter, including suspended or dissolved salts at producing areas before it enters the pipe line. Even this method would not eliminate the problem of precipitated paraffin and asphaltine. The writer knows of one company that has several hundred thousand barrels of tank bottoms in steel storage that have been accumulated over a period of more than 10 years. This storage of an unmerchantable product represents a tremendous loss to that company, and the problem of reclamation and disposal becomes more difficult day by day.

Up to recent years most companies looked upon the problem as a necessary evil and disposed of it in the simple but economical method of burning. Even today some companies resort to this means of disposal, but most of them allow the tank bottoms to accumulate over a period of several years. Tank bottoms at tank farms are usually collected in one of the storage tanks, and a temporary treating plant is installed or the treatment is carried out in the storage tank itself. No two plants are built alike. The design and method differ with the individuals or companies constructing them.

The Humble Oil & Refining Co. has handled its tank bottoms by both of the above mentioned procedures, namely, temporary treating plants and treatment in the 55,000-bbl. tank itself, but with only mediocre success, and causing much concern, not only from an economical standpoint, but also on account of hazard involved.

HUMBLE PIPE LINE COMPANY

DAILY REPORT ON WEBSTER TREATING PLANT

24 HOURS ENDING 7 A.M. ..... 19.....

MESSRS:

.....

.....

HOUSTON, TEXAS.

ITEMS:	GRADE	QUANTITY	PRICE	COST	% BS & W	CORRTD GRAVITY	OIL TEMP
FLUID RECEIVED IN TREATER	W.F.C.	1015			32%		
TREATED OIL DELIVERED	W.F.C.	820			.6%	29.4	195°F.
FUEL USED	W.F.C.	10.5	1 40	14 70			
CHEMICAL USED	Breaxit	25 Gal.	1 20	30 00			
SALT USED		1400#	.01	14 00			
LABOR				18 00			
LUBRICATING OIL USED							
REPAIRS TO EQUIPMENT							
TOTAL COST				76 70			

.093 per bbl.

	GALLONS	COST	CREDIT
GASOLINE RECOVERED	2020		
GASOLINE DELIVERED TO CRUDE			
GASOLINE DELIVERED TO STOREHOUSE			

REMARKS: (List of Repairs Made giving Part number)

Figure 1.

About a year ago it was decided to investigate the problem more thoroughly, and this investigation substantiated the generally accepted belief that the age of tank bottoms has a direct bearing on the difficulty with which they are demulsified, this being due to the concentration of the third or emulsifying agent and the resulting strengthening of the surface tension of the film of oil around the globules of water. The concentration may also be the cause of the formation of a stable emulsion when collodial substances come in contact with suspended or free water, according to "Oil Field Emulsion," by D. B. Dow (Bureau of Mines Bulletin No. 250).

Upon long standing the dissolved gases permeate the upper layer of oil or pass into the air, causing the b.s. to become more compact and to set. It was also concluded that since the problem was always present, it could be handled best by means of a permanent installation.

One plant erected by the Humble Oil & Refining Co. cost approximately $13,000. The results attained during the last seven months have been satisfactory. Just prior to this installation, oil was being reclaimed from tank bottoms by means of a temporary setup consisting of two boilers, a homemade heat exchanger, a gun barrel and stock tanks. As a matter of comparison between the two plants, the treating cost per barrel of reclaimed oil was reduced from around 30 cents to an average of 9 cents per barrel. Most independent concerns which make a business of treating tank bottoms charge at least 25 cents a barrel for reclaimed oil. Even though the capacity of the plant was increased more a third, the use of one boiler was discontinued with a daily consumption of 20 bbls. of fuel. A saving in labor, chemical and other operating costs was effected.

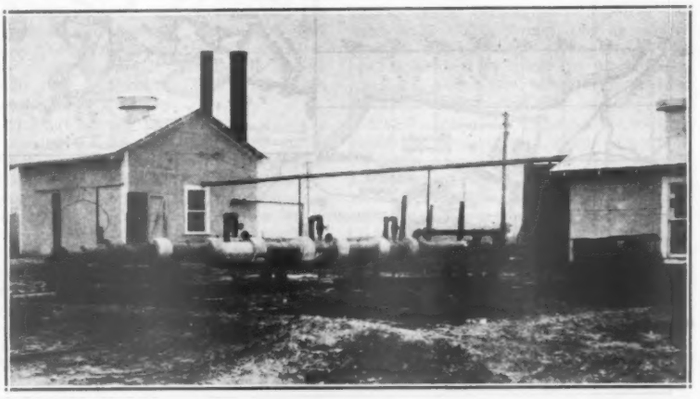


Figure 4.

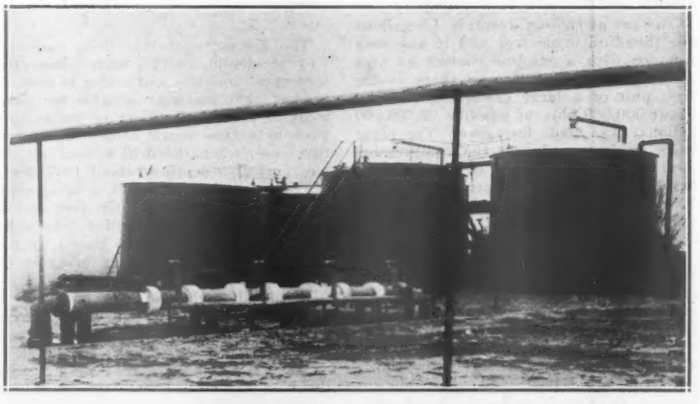


Figure 5.

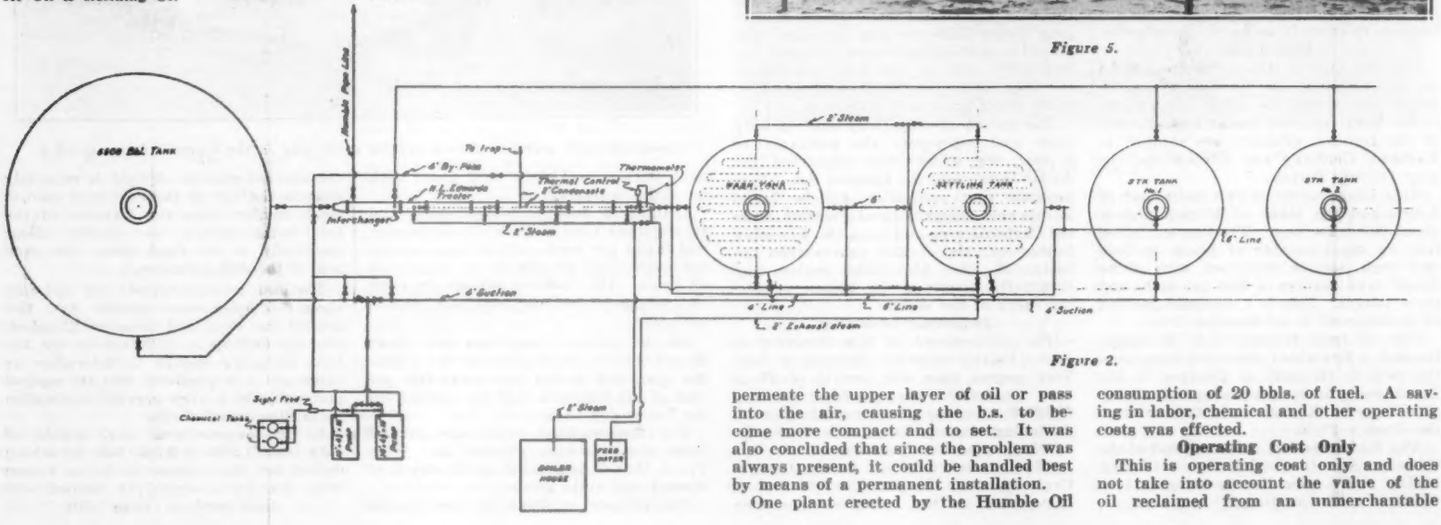


Figure 2.

Operating Cost Only

This is operating cost only and does not take into account the value of the oil reclaimed from an unmerchantable

*Petroleum Engineering Department, Humble Oil & Refining Co.

product. At this rate of saving, the reduction in operating costs means the paying off of the total investment in a period of less than a year, leaving a tangible asset less depreciation.

Figure 1 is a facsimile of one of the treating reports kept daily at the plant, representing a 24-hour run.

Note that the cost is itemized into chemical, labor and fuel, and also that the finished oil is 1 per cent or better b.s. and water content.

Following is a general description of the treating process. Figure 2 gives a single line drawing of the general layout.

something unexpected happens. Exhaust steam from the treater passes through coils in a gun barrel and settling tank, after which the steam passes through a pre-heater for boiler feed water. All heating equipment is lagged with asbestos, and the only heat dissipated is part of the exhaust steam from the pump that handles clean oil to the pipe line. This pump operates only four or five hours each day.

A 55,000-bbl. tank has been set aside as the tank and b.s. is pumped to 55,000- accumulates in the various tanks, the swing line is lowered to the bottom of

cedure will practically eliminate the necessity of ever going into a tank for the purpose of cleaning out b.s.

Demulsifying Agent Used

From the 55,000-bbl. storage tank, the b.s. is drawn through a six-inch suction line by a 10 by 4½ by 10 steam pump. Directly ahead of the pump, a one-half inch chemical line is tied into the suction. Here a 2 per cent to 5 per cent fresh water solution of Breaxit, a product made and marketed by the Humble Oil & Refining Co., is mixed with the incoming fluid. Breaxit has proved economical and meets all our requirements

as a demulsifying agent. The chemical solution is further incorporated in passing through the valves of the pump and baffled section of the treater.

Fom the pump the incoming fluid and mixed chemical pass through the interchanger, the tubular steam section, and baffle section of the treater. The tubular section consists of 61 five-eighth inch tubes made of admiralty metal. In Figure 3, the steam sections are marked A, baffle sections B, thermostatic control C, and interchanger I. This temperature control valve is a direct mercury-actu-

(Continued on Page 138)

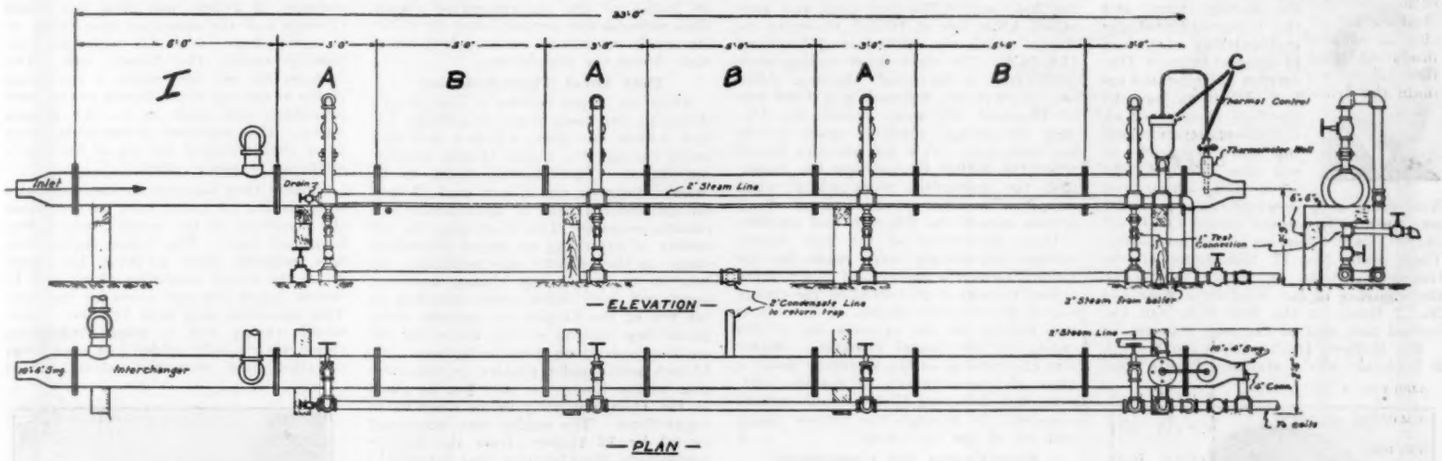
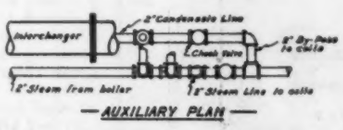


Figure 3.

Note by-passes around gun barrel and settling tanks. This is to prevent a complete shutdown in case one of these tanks has to be opened. The capacity of the plant is reduced about one-third in bypassing one of these tanks, but a complete shutdown is never necessary unless

the tank and b.s. is pumped to 55,000- bbl. storage. This procedure prevents a conical deposition of b.s. usually found in tanks that have not been cleaned over a long period of time, and also delivers to the plant a more desirable stock which greatly facilitates treating. This pro-



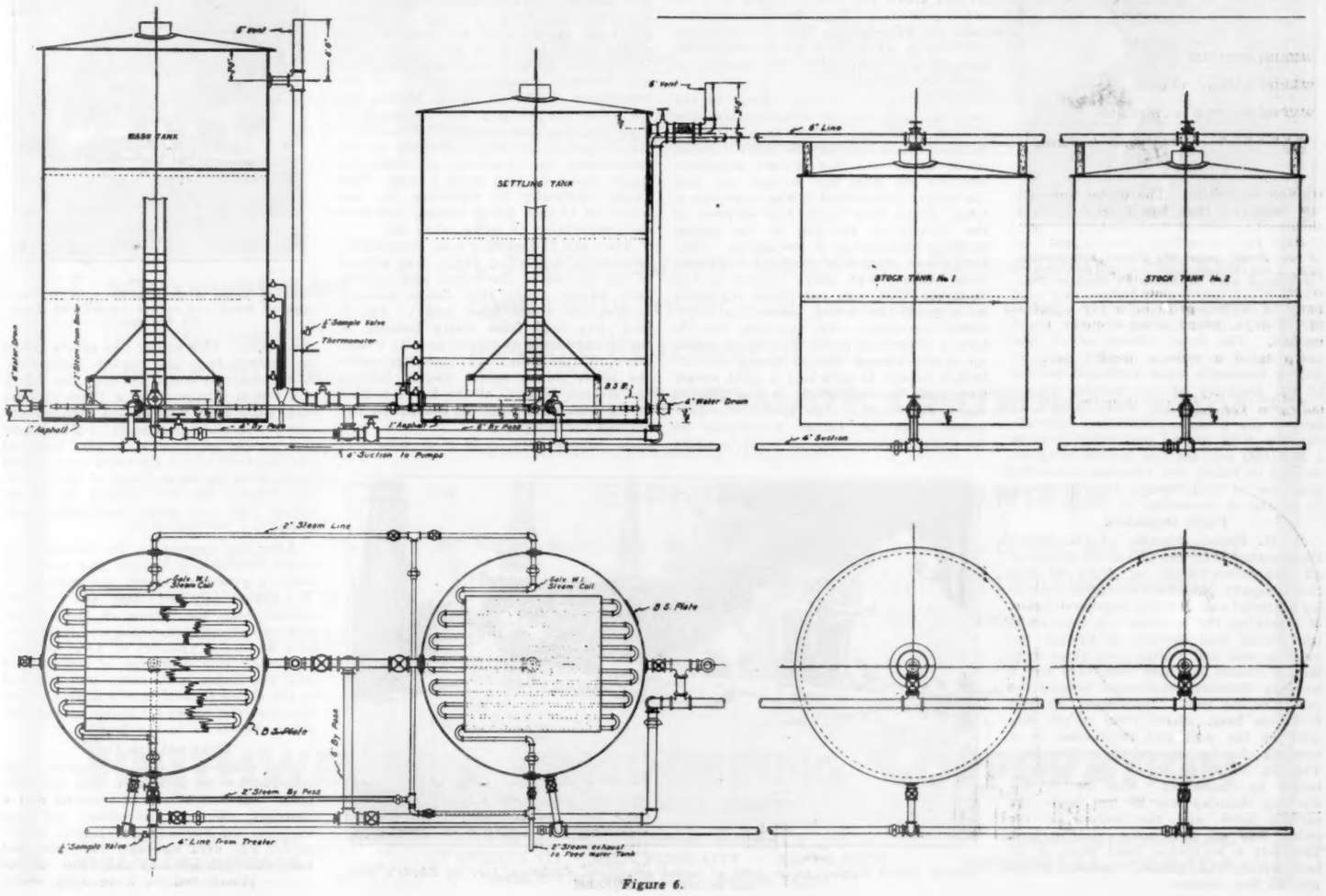


Figure 6.

Novel Methods Used in Fighting Fires

Tunnels, Corrugated Iron Shields and Wind Machines Play Important Part in Conquering Flames at Santa Fe Springs

By L. P. Stockman

LOS ANGELES, Calif., July 29.—Costly oil field fires have marked developments of the Santa Fe Springs area, and the means adopted for extinguishing them are of unusual interest. Disastrous gas blowouts began almost as soon as the field was opened up and these are still causing operators grief. At one time late last year when Buckbee and Nordstrum zone development was under way two wells located about 1,000 feet apart were burning simultaneously. These were No. 17 Nordstrum of the George F. Getty Co. which proved up the existence of the Nordstrum zone and No. 2 Grohs of the Bell View Oil Co. located just east of the four corners.

The McKeon Drilling Co.'s No. 2 York & Lockhart was a stubborn fire to combat and continued to burn for a period of 26 days before being brought under control. The large volume of oil and gas created a serious problem and required unusually close vigilance because of the tendency of the burning oil to boil over the retaining walls thrown up around the project. Operators throughout the field united and after forming a $200,000 pool for fire control purposes decided to follow out previous successful practices of intercepting the oil string by means of tunneling.

R. H. Pence, manager, Signal Engineering Co., Long Beach, Calif., which had charge of control work at Santa Fe Springs fires.

Fight Organized

R. H. Pence, manager of the Signal Engineering Co., was placed in charge of all subsurface work on June 20 and this company immediately started collecting material and devising ways and means of attacking the problem. A corrugated iron shield was thrown up around the burning well and a little over three days later a tunnel had been completed and a working chamber constructed around the casing of the well. The tunnel, 55 feet, 6 inches long, starts from a pit dug west of the well and terminates in a working chamber around the well casing. The pit, 36 by 36 by 30 feet, was protected by timbering. The top of the working chamber was 25 feet below the surface level, and the bottom of the cellar was 43 feet below the surface. This left a maximum head room of 18 feet within the tunnel chamber which was 15 feet square.

Control work was undertaken upon completion of the tunnel and working chamber. Drilling records indicated that the hole was 6,735 feet deep and contained 1,020 feet of 16-inch stovepipe inside of which was 4,089 feet of 54-pound 11¾-inch. The three inner strings were 5,298 feet of 36-pound 8⅝-inch, 5,600 feet of 26-pound, 6⅝-inch and 6,340 feet of 16-pound, 4¾-inch. Inside the 4¾-inch oil string, 2½-inch upset tubing had been used. This was the pipe record when the Signal Engineering Co. undertook the subsurface work which when completed resulted in the removal of all strings expect the 6⅝-inch and smaller.

Upon completion of the pipe survey clamps immediately were made for the 16-inch stovepipe casing and 2-inch holes drilled through a gate fixed on the clamp, one at the extreme bottom of the casing and another at the extreme top of the casing in the tunnel chamber. Water was encountered in the stovepipe under a head of approximately 5 pounds pressure, but this was bled out and cement circulated in through the bottom clamp and out of the top clamp.

First Cement Job Unsuccessful

The first cement job on this string was unsuccessful, but the second job on the 16-inch was effective as the cement was allowed to overflow the top connection before the lower connection was closed, this insuring placing the cement. Cement was mixed and circulated from the surface and delivered down through the tunnel into the working chamber located 35 feet below the fire by means of a cement pipe line. The cement placed behind the 16-inch was found to have set sufficiently hard to proceed with work and cutting operations were started 12 hours later.

The system of hanging casing in the well was such that all weight was on the 11-inch, this pipe having been anchored on hard wood sills in the cellar. In as much as it was not known definitely whether the sills had burned out and the weight transferred to the stovepipe, a large clamp was made and secured to the 16-inch at the top of the tunnel working chamber as a precaution. This clamp was supported by 8 by 8 timbers from below. The lower section of the stovepipe then was cut away beginning at a point 18 inches above the lower cementing clamp. On exposing the 11-inch a cementing clamp similar in make-up to the 16-inch cement clamp was attached to the 11-inch and a split spider with slips was attached to the 11-inch above this clamp. The spider was supported from the timber foundation on the floor of the tunnel in order to make sure that all weight was anchored on the floor. The remainder of the 16-inch stovepipe then was removed up to within 18 inches of the top cementing clamp. This removal was accomplished by utilizing air-driven chisels and required about eight hours for completion.

Hole Bored Through Clamp

After the upper section of the 16-inch stovepipe had been removed and the 11-inch totally laid bare, a 2-inch hole was bored through the lower 11-inch cementing clamp. This showed water to be present between the 8-inch and 11-inch strings under a head of approximately 6 pounds pressure. This eliminated the necessity of attaching an upper cementing clamp as the pressure was negligible. In lieu of the cementing clamp, however, one-fourth inch valves were attached at the top of the 11-inch on opposite sides permitting venting of the air when cementing operations were under way. An 11-inch split spider similar in construction to the lower one was put in place on the 11-inch directly below these valve connections. The spider was supported by 12 by 12 timbers from the bottom foundations, thus insuring that the weight of the total inner strings was securely anchored at the bottom foundations. Cement then was run in between the 8-inch and 11-inch strings and allowed to stand for 12 hours.

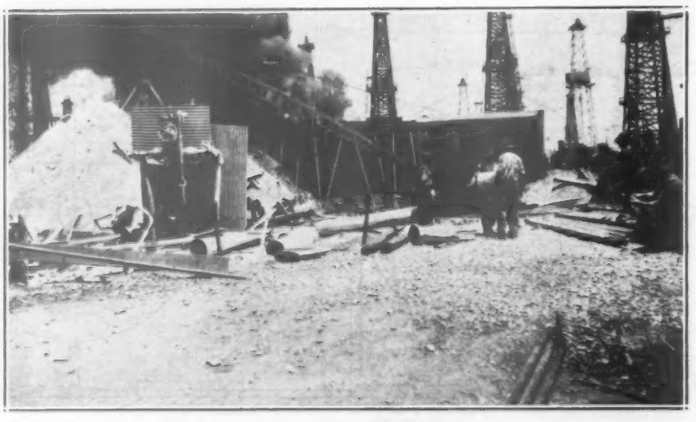
Several one-fourth inch test holes subsequently were drilled into the 11-inch and the cement was found to have made its initial set at at that time. The 11-inch casing then was ripped vertically on opposite sides from a point 18 inches above the lower cementing clamp and 18 inches below the upper vent holes. Following this circular cuts were made top and bottom, permitting removal of the two halves of 11-inch casing. During this operation the 11-inch was anchored at both the top and bottom, but notwithstanding this security a settling of the foundations due to seepage permitted the upper spider to drop down 1 inch. This caused difficulty in removing the two halves of 11-inch which already had been cut preparatory to being taken out.

After the 11-inch had been successfully removed a cementing clamp was affixed at the bottom of the 8-inch and another split spider above this clamp securely holding the 8-inch from below. The 8-inch was held from above because of the western head assembly, and its weight therefore rested on the 11-inch top spider, the lower 8-inch spider merely holding the stretch, if any, of the lower section of the 8-inch after cutting operations had severed the 8-inch.

A three-quarter inch pilot hole was drilled in the 8-inch through the cementing clamp and a slight vacuum was noted on this job between the 6-inch and 8-inch strings. A 2-inch hole then was bored through and the operation was found to be much more successful with the pilot hole preceding the 2-inch hole. The vacuum did not necessitate a cementing clamp at the top of the 8-inch so the same procedure was used as in the 11-inch string. This consisted of one-fourth inch valve connections at the top of the 8-inch string on opposite sides.

Cement then was run in and test holes were drilled 12 hours later to determine the condition of the cement, which was found all right. The 8-inch casing then was removed from a point 18 inches above the 8-inch cementing clamp and 18 inches below the air vents at the top. This operation laid bare 7½ feet of the 6-inch casing and a 6-inch cementing clamp with a split spider just above was installed flush with the bottom cut of the 8-inch. This spider like others rested on timbers from the bottom foundation. A vacuum was found between the 4-inch and 6-inch strings when a three-quarters inch pilot hole was drilled through the clamp. As done previously, a 2-inch hole then was bored through the pilot hole and two one-fourth inch air vents were placed flush with the upper stub of the 8-inch. The cement job was similar in all respects with the others previously mentioned.

Pulling down a derrick to facilitate fire control work and reduce hazards at Santa Fe Springs.



Steam shovel digging pit at start of tunnel operations. Christmas tree on Rhode's well can be seen in foreground.

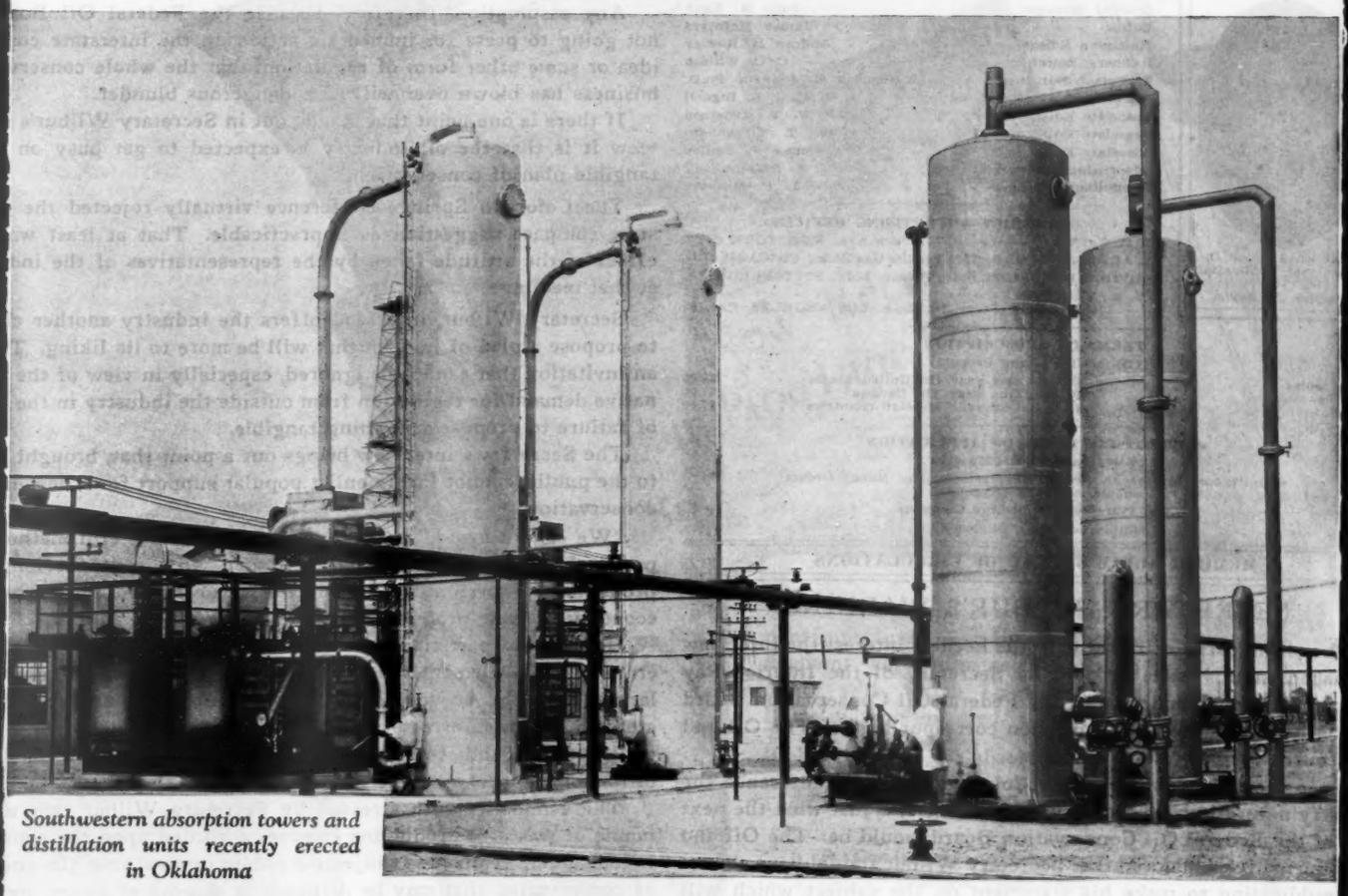
After the cementing job between the 4-inch and 6-inch strings had stood 24 hours a producing clamp, designed by C. W. Froome of the Union Oil Co. was affixed near the bottom of the exposed section of the 6-inch casing and tested out to a hydraulic pressure of 1,000 pounds. Following this operation a bottom mill drill 2½ inches in diameter was attached to the clamp through a 4-inch gate. This drill was run by an air motor as were all other operations in the tunnel.

Clean-out Job Done

The 6⅝-inch slug and cement were removed by the drill and then the complete drill assembly was removed and a thorough clean-out job done, including blowing out any cuttings lodged in the gate. The drill assembly then was put back in place, and 4¾-inch drilled

(Continued on Page 138)

SOUTHWESTERN GASOLINE ABSORPTION PLANTS



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SECRETARY WILBUR'S WARNING

The oil industry will read with the keenest interest the interview published in this issue granted by Secretary of the Interior Ray Lyman Wilbur as chairman of the Federal Oil Conservation Board to Charles E. Kern, the Washington correspondent of The Oil and Gas Journal.

Since the adjournment of the Colorado Springs conference the industry naturally has been very curious to know just what the next step of the Federal Oil Conservation Board would be. The Oil and Gas Journal feels honored that Secretary Wilbur should have chosen this publication to make his statement on the subject which will set at rest much speculation and not a little anxiety.

Chairman Wilbur very explicitly says:

"There is no intention of calling another conference until sufficient progress has been made in formulating a plan that will give assurance that something tangible can be done and I have no idea when that will be."

The secretary, however, goes further than this and indicates very clearly that the next step should be made by the oil industry itself.

In fact he returns practically to the original statement by President Coolidge in creating the Federal Oil Conservation Board that "the industry itself might be permitted to determine its own future."

Chairman Wilbur says: "I am in full sympathy with the thought that the oil industry itself should solve the problem of conservation and put into effect plans for the orderly handling of the production of oil without any interference from Washington."

He even elaborates this into the unmistakable statement that "the position of the board has always been to present the facts and to have the industry cure its own ills."

Nothing could be plainer than that and he adds that "the board was created and it is now working to assist the industry in the interest of conservation, but it has never desired a position of control and it wishes only to help those who are working to stop wastes of all varieties."

Nevertheless there is a reiterated note of warning in the statement that "back in the minds of many people there has been the belief that if the industry does not conduct its business in the interest of economic development for the benefit of the public at large and for its own benefit, somehow and somewhere there will inevitably come a demand that the great natural resources of oil and natural gas shall not be wasted."

In other words the position which has existed since the creation of the Federal Oil Board remains unchanged. The necessity for oil conservation is again being put up to the industry by the Government backed by a growing public sentiment, with the alternative plainly stated that if the industry fails to solve its own problem a demand for regulation from outside will become inevitable.

Any assumption, therefore, because the Federal Oil Board is not going to press for immediate action on the interstate compact idea or some other form of regulation, that the whole conservation business has blown over will be a dangerous blunder.

If there is one point that stands out in Secretary Wilbur's interview it is that the oil industry is expected to get busy on some tangible plan of conservation.

The Colorado Springs conference virtually rejected the interstate compact suggestion as impracticable. That at least was the effect of the attitude taken by the representatives of the industry at that meeting.

Secretary Wilbur, in effect, offers the industry another chance to propose a plan of its own that will be more to its liking. This is an invitation that cannot be ignored, especially in view of the alternative demand for regulation from outside the industry in the event of failure to propose something tangible.

The Secretary's interview brings out a point that, brought home to the public, cannot fail to enlist popular support for a demand for conservation.

"We cannot avoid," he says, "the fact that wasteful methods of production are paid for by the consumer and that in the long run products will carry a cheaper price if careful attention is given to economy in their production."

He referred particularly to the agreement fostered by the Government in Kettleman Hills to prevent waste of gas and assure the largest possible recovery of oil and at the same time keep the oil stored in its natural reservoir until needed, instead of bringing it to the surface and storing it at great additional expense that must ultimately be borne by the consuming public.

The economic truth stressed by Secretary Wilbur that uneconomic or wasteful production imposes a burden upon the consumer is too seldom realized. It injects a public interest into the question of conservation that may be difficult to dispose of except by remedying wasteful methods.

The direct loss to the industry from overproduction through depressed markets in the period of peak consumption is again being demonstrated. It is a staggering price to be paid for failure to profit from the experience of practically every other big industry which has solved its overproduction problem by restricting output in line with demand.

Hundreds of industries are making money by increasing efficiency, better utilization, and cutting out wastes and the oil industry has not been behind in these except in the notorious failure to stop the biggest waste of all—the loss caused by persistent overproduction depressing markets and incurring needless storage and handling charges that handicap the industry and burden the consumer.

The present position of the export market, now the subject of international conferences abroad, is another consequence of the failure of conservation in the United States. That failure appears to have given our competitors abroad an opportunity to reproach the American industry as responsible for the depressed state of the world oil business. The oil leaders of Europe who came to this country last year with promises to assist in world stabilization are pointedly reminding us that they are in position to conserve their oil if the United States will do the same, but that so long as we overproduce stabilization is impossible.

To them the business judgment of conservation is so plain that they can only marvel that with all our American keenness the American oil industry cannot see it and get together in putting it into effect without further delay that is costing us dearly every day it is prolonged.

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in Pipe Line Laying
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Results From Co-operative Research

Joint Program of Petroleum and Automobile Industries Covering Motor Fuel Performance of Great Value. Investigate Detonation

By H. C. Dickinson*
Bureau of Standards

SUMMARY OF RESEARCH REPORT

In this paper Doctor Dickinson reviews briefly the causes leading to birth of the Co-operative Fuel Research by the American Petroleum Institute and the National Automobile Chamber of Commerce, the appointment of the joint steering committee to confer on program and pass upon results, the progress made in the several phases of the work, and the projects now engaging attention.

An outstanding feature has been the development of harmony and co-operation among engineers of the petroleum and the automotive industries. Mutual adaptation of the fuel and the engine to each other has been the guiding principle in the work, to the end of national economy and internal-combustion engine efficiency.

Projects undertaken include the determination of the grade of gasoline that affords the maximum number of car-miles per barrel of crude oil; the causes of and remedies for crankcase-oil dilution; the effect of initial volatility on starting, acceleration and general behavior of the engine; and measurement of the detonating characteristics of a fuel.

A bibliography of the progress reports is given at the end of the paper.

In conclusion, the author emphasizes that this research work already has brought into accord the engineering staffs of the two industries; contributed largely to fuel saving for the country; developed all the data needed to combat crankcase-oil dilution; provided complete data on the relationship of fuels to engine-starting; cleared up the question of the effect of fuel on engine acceleration; and is now concerned with securing satisfactory control over the relationship between fuels and compression ratios.

Gasoline was for many years a waste product fro[m] the refining of kerosene and contained all the volatile matter that the law of the state and the laws of nature would permit. Up to about 1910 no one complained and gasoline was generally accepted as such.

About this time the demand began to push the supply and the quality began to change. No reliable information was at hand as to the effect of gasoline volatility on engine performance but hot-spots began to appear as part of the engine manifold and there was much discussion of the relative merits of small spots which were very hot and large spots that were not, as well as hot air without hot-spots.

In 1914 a general conference was called jointly by the Bureau of Standards and the Bureau of Mines to consider the question of a national interpretation of what constituted gasoline, or in short a definition of gasoline. This proposal met with a storm of protest from the petroleum industry, but shortly thereafter war distracted attention from such minor matters as gasoline definitions and specifications. When conditions became more settled after 1918, complaints concerning gasoline grew louder. There were charges and countercharges, claims and counterclaims between the technical men in the automotive and petroleum industries. Still there was no real information, worthy of the name, as to how the fuel behaved in the engine or what either industry might properly expect or demand of the other.

At this stage of the controversy and after numerous attempts to secure some sort of accord, the Co-operative Fuel Research was born. This began and has continued as a sort of four-sided combine. The National Automobile Chamber of Commerce and the American Petroleum Institute, representing the two industries, furnished the funds. The Society of Automotive Engineers undertook to administer the funds and watch the technical program, and the Bureau of Standards undertook to carry on most of the research work supplemented by the Research Department of the society. A joint steering committee was appointed to confer on program and pass upon the results.

The earlier conferences developed much divergence of opinion between the two groups; in fact, controversy was the order of the day. This condition, however, was soon changed. Harmony and co-operation among the members of the steering committee and the engineers of the two industries has become an outstanding feature of the project. Better co-operation between interests so diverse would be hard to find.

One development which probably has been influenced to a large extent by the contacts between automotive and petroleum engineers in connection with the co-operative fuel research, is the establishment of fuel-research laboratories by most of the larger oil companies. In 1922 there was not, so far as we know, a single laboratory in the petroleum industry, and perhaps only one or two in the automotive industry, equipped for effective study of the relationship of fuel characteristics to engine performance. Today few large companies in the oil industry are without such laboratories and at the present rate soon there will be none.

The co-operative fuel research has had for its one guiding principle the mutual adaptation of the fuel to the engine and the engine to the fuel, to the end of national economy and efficiency. The several individual projects which have been undertaken, completed and reported in committee and at general meetings of the society and the American Petroleum Institute for the last six years have had for their aim this one objective. They are referred to here only briefly.

*M.S.A.E.—Chief, heat and power division. Paper presented at semiannual meeting of the Society of Automotive Engineers.

Volatility Requirements

Under this joint arrangement, the first project undertaken was to determine what was the best gasoline as regards volatility, considered on a broad economic basis; in other words, what grade of gasoline would afford the maximum number of car-miles of transportation per barrel of crude oil used in its production. This question obviously could not be answered in the laboratory alone. It did not suffice to know how much more efficiently an ideal engine in the laboratory could be run on one fuel than on another; it was necessary to know how much more of one kind of fuel than of another the average driver would use on the road. This difference multiplied by the total number of cars in the country might be expected to give the difference in national consumption of the two fuels. This figure, together with an estimate of the difference in cost of the two fuels, would answer the question.

The problem was attacked from two angles; first, four test fuels designated A, B, C and D, covering the practical range of volatilities, were specified for experimental purposes and made up in quantity by two refineries, one in the Mid-West and one in the East. For the first angle of attack, passenger cars of four types were selected, these four types representing about 75 per cent of the total number of cars in service in the country at that time. One used car of each type, which had been run from one to two years, was secured for a test program at the Bureau of Standards. These cars were put through a most exhaustive series of tests for average fuel consumption with each of the four different fuels under road conditions. The details of this program were carefully considered by the steering committee as well as by the Bureau of Standards staff to be sure that the results would be truly typical of average driving conditions. The program consisted of one series of tests in summer with all four cars and another complete series in winter with two of the cars.

For the second angle of attack, which was put through mainly by the Research Department of the society, 10 automobile manufacturing companies were enlisted in two road-test programs, one run in summer and another in winter. Each company selected a group of 4 to 12 cars driven in regular service by members of its staff, and purchased enough of the four test fuels to supply the group of selected cars for at least four weeks. Each of these cars was supplied with one of the experimental fuels for one week, another for the second week, and so on, according to a carefully prearranged program designed to average-out weather conditions and individual differences. Thus, each series of tests for each company lasted four weeks. The total number of car-weeks was about 250 for the summer series. The following winter this entire program was repeated under cold-weather conditions, the group of companies not being quite the same for the two series.

When the results of all these four independent series of tests had been collected, the following conclusions were reached:

(1) Within the range covered by the test fuels, the number of ton-miles per gallon is independent of the fuel volatility. Consequently, the heaviest fuel was the most economical. (Federal specifications for motor gasoline were modified on the strength of this result.)

(2) Gasoline consumption is somewhat greater in winter than in summer.

(3) Dilution of crankcase oil is consistently greater the heavier or less volatile the fuel is.

(4) Dilution of crankcase oil is much greater in cold weather than in warm weather.

(5) Small apparent differences in initial fuel-volatility have a large effect on engine starting.

(6) Starting ability is the quality most readily noted by the driver.

From this survey it was concluded that economy dictates the use of as heavy a fuel as possible but that a practical limit in this direction is set by the dilution of crankcase oil and the difficulty of starting.

Oil-Dilution Research

The committee then decided to make a study of crankcase oil dilution. Data were already at hand from the analysis of samples secured in the tests mentioned. A carefully arranged program on this subject, covering nearly two years of work at the Bureau of Standards, led to the following general conclusions:

(1) Dilution depends upon the temperature of the engine cylinder walls and upon the volatility of the gasoline, the 90-per cent point on the A.S.T.M. distillation curve being taken as an index of volatility.

(2) Dilution increases with richness of mixture.

(3) Dilution decreases with higher temperature in the crankcase, particularly when the crankcase is ventilated.

(4) Dilution is not much affected by air temperature, piston and piston-ring fit, or oil viscosity.

Thus, to reduce dilution:

(1) Operate with high cylinder-wall temperature;

(2) Reduce the time required to reach normal operating temperature;

(3) Always use as lean mixtures as practicable;

(4) Operate with high oil-temperature;

(5) Ventilate the crankcase.

As the Bureau's work on fuel consumption was supplemented by the road service-tests mentioned, the laboratory results on dilution were likewise supplemented by the analysis of some 600 samples of used crankcase oils. These samples were collected according to a carefully prepared schedule from typical makes of car distributed throughout the country. The collection of samples was undertaken by the Research Department of the society and the results have been summarized and published.

Engine-Starting Studies

The results mentioned indicated that the volatility of the gasoline in the initial portion of the distillation range, in its effect on starting, was the characteristic most readily recognized by the user. This led to undertaking the third major portion of the program; namely, the effect of initial volatility on engine starting. To make this research of tangible value, it was necessary first to devise a method of measuring the volatility of the fuel which would give results comparable with those obtained in the engine manifold. Such a method was devised and after a series of careful comparisons it was found that the same result could be obtained from the standard A.S.T.M. distillation test. It was found possible to correlate the results of distillation tests with those of a long series of engine-starting tests performed in the laboratory and to arrive at very useful conclusions which are only beginning to find general application. The result may be stated somewhat as follows:

Given a fuel of which the distillation data are known and an engine the choke mechanism of which will deliver a 1-to-1 fuel-air mixture or any other known mixture ratio, one can state the minimum temperature at which that engine-fuel combination will start with about 10 revolutions of the crankshaft; also the minimum temperature at which the engine can be started at all.

This result makes it possible for the first time to select or specify a fuel which will give proper starting under any specified condition. This information should go far toward securing uniform starting conditions through better control of engine-starting devices, and of fuel volatility in relation to temperature.

Another phase of this project dealing with the effect of fuel volatility has to do with the effect of this property on ac-

(Continued on Page 151)

The premium charged by most refiners and distributors for Dubbs Cracked Gasoline over the price of their refinery straight run, is justified by the superior anti-knock quality, not its increased cost, and it is more than worth the difference

Universal Oil Products Co
Chicago, Illinois

Dubbs Cracking Process
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A. P. I. ADOPTS PROCEDURE ON CODE OF MARKETING ETHICS

NEW YORK, July 30.—The board of directors of the American Petroleum Institute in session in New York today approved the code of practices for marketing refined petroleum products as authorized by the Federal Trade Commission.

The directors stated that believing the code to be a reasonable declaration of fair and good practice and in the interest of the industry and the public they recommend "acceptance thereof as of August 31, 1929, by the unit engaged in refining and marketing petroleum products and urge upon all interested and concerned honest adherence to and faithful observance of the provisions of said code."

The resolution adopted called for the following plan of procedure to be followed by the American Petroleum Institute:

1. A national committee on interpretation of the code of five members shall be appointed by the president; such committee shall from time to time make and publish for the information of the industry technical interpretations of the various provisions of the code. Three members acting unanimously shall constitute a quorum.

2. The refining and marketing area of the United States is hereby divided into geographical regions, to-wit: Pacific Coast region, Washington, Oregon, California, Nevada and Arizona; Rocky Mountain region, Montana, Idaho, Wyoming, Utah, Colorado and New Mexico; Southwestern region, Texas, Arkansas and Louisiana; Mid-Continent region, Oklahoma and Kansas; Middle Western region, Ohio, Wisconsin, Indiana, Minnesota, Michigan, North Dakota, South Dakota, Illinois, Missouri, Nebraska and Iowa; Eastern region, Maine, New Hampshire, Rhode Island, New York, Pennsylvania, Maryland, Virginia, Tennessee, Mississippi, Alabama, Florida, Vermont, Massachusetts, Connecticut, New Jersey, Delaware, West Virginia, Kentucky, North Carolina, South Carolina, Georgia, and the District of Columbia.

3. The existing regional code of ethics committees for the six regions above defined shall be continued and the president is authorized to make any additions to the membership of such committees as may be desirable.

4. It shall be the function of each regional committee, either through its own activity direct, or through state or such other appropriate subcommittees as the chairman of each regional committee may appoint, and without expense to the institute, (a) through conferences, public meetings or personal contact to undertake to see that every refinery and marketer of petroleum and, or its products in the region is informed of the code and understands its provisions; (b) to urge every such refiner and, or marketer doing business in the region to accept and honestly and faithfully observe the provisions of the code; (c) to urge such refiners and, or marketers promptly to advise the Federal Trade Commission in writing of acceptance of and intention to adhere to the provisions of the code.

The chairman of each regional committee is authorized and urged to appoint promptly either the state subcommittees or a general or district subcommittee for his region and such state or other subcommittees are urged first to devote their time and vigorous attention to the accomplishment of those objectives indicated in paragraphs a, b and c.

5. It is recommended that oil men or companies do not make complaints against competitors to the Federal Trade Commission without first having exhausted every amicable means of getting the competitor to follow the provisions of the code, to assist the industry in making interpretations and in adjusting complaints each state subcommittee, or in the absence of a state committee some other subcommittee designated by the regional committee or local or district committee formed under the subcommittee indicated, is authorized to function as a committee on conciliation and the procedure shall be as follows: (a) disputes with respect to interpretation or complaints against violation of some provision of the code may be filed in writing by the disputants or the complainant with the chairman of the state subcommittee or the other subcommittee designated for the purpose. The subcommittee acting as a committee on conciliation may act upon the complaint and attempt to conciliate the competitors involved and obtain strict adherence to the provisions of the code; (b) if the dispute be over the interpretation of some provision of the code the chairman of the subcommittee on conciliation may report the facts to the executive vice president of the institute who shall refer the case to the

(Continued on Page 144)

High Spots in Field News

KANSAS

New Rice County wildcat expected to be 100-bbl. producer and another filling with oil at rate of 200 feet an hour. Barnsdall company well in south extension of Greenwich Pool, Sedgwick County, swabbed 110 bbls. in 10 hours.

New Butler County wildcat is showing for producer near Sedgwick County line.

Higgins & Steinbuchel's test in Rice County shows 51 gravity oil, highest in State.

WEST TEXAS

New and shallower pay struck in Link-Taylor Pool, Pecos County.

Wildcat in Schleicher County now described as "dud."

Possibility of new pool in Crockett County.

Irion County discovery well holding up.

Winkler County proration approved at meeting of railroad commission and operators.

OKLAHOMA

Production of Greater Seminole July 30 was 397,869 bbls. and of Oklahoma City Field 28,515 bbls. The Indian Territory Illuminating Oil Co.'s No. 1 Johnson, latest and largest producer, was shut in.

Magnolia company well in Lincoln County made 1,322 bbls. flowing by heads with no water showing.

NORTH TEXAS AND PANHANDLE

Cooke County well flowing 3,700 bbls. of 40 gravity from 1,466 feet.

Possible new deep pays in Jack County and Young County.

Extension of Boggy Creek Pool in Wilbarger County.

Gray County production gains 3,600 bbls.

SOUTHWEST TEXAS

New Serpentine pool in Caldwell County.

Activity suspended at Darst Creek Pool, Guadalupe County, pending possible agreement on conservative development.

ROCKY MOUNTAIN AREA

Renewed activity in Big Horn Basin, Wyoming.

Continental company well in Lea County, New Mexico, has good showing of oil and gas.

CALIFORNIA

Santa Fe Springs now at critical stage. Peak of 295,000 bbls. may be exceeded within a month if sufficient number of new wells completed.

NORTH LOUISIANA-ARKANSAS

Dixie district has three completions.

Monroe Field well blows out and Richland Field has fourth crater.

GULF COAST

Deep pools at Barbers Hill may be connected. Largest deep sand producer there may start another drilling boom.

CENTRAL WEST

Tiffin Field has 1,000-bbl. well.

Southwestern Indiana reports 11,750,000-foot gas well.

MICHIGAN

Muskegon producing 20,000 bbls. a day and wildcatting spreading in Michigan.

MISSISSIPPI

Gas showing in Monroe County, Mississippi, well.

DARST CREEK ACTIVITY TEMPORARILY SUSPENDED

SAN ANTONIO, Tex., July 30.—All activity in the new Darst Creek Pool in Guadalupe County has been temporarily suspended pending work on an agreement with the Railroad Commission concerning its development. The Texas Company, which drilled the discovery well, had started to drill an offset and several derricks have been erected and rigs moved in. Probably a plan will be agreed upon for a slow development of the pool. Most of the proven acreage is owned by a few major companies.

The shutdown is understood to be due to an agreement of the major companies and is temporary to permit of preparing tanks and pipe line connections in advance of starting operations. It is possible some agreement among the big companies who own the heart of the field will be reached before drilling starts again and the development of the field will be conservative. The Railroad Commission was approached by a major company concerning issuing some kind of an order but has issued none so far.

The Texas Company and the Humble Oil & Refining Co. are each starting to build tank farms to provide for handling the production in the Darst Creek Field. Humble company's tank farm is at the field. The Texas Company's tank farm for which land was purchased Monday is at Sullivan on the Southern Pacific, 10 miles north of the field, and a pipe line is now being constructed from the field to Sullivan. Each company will put up several 55,000-bbl. tanks.

Late Fields

NORTH TEXAS

FORT WORTH, Tex., July 30.—Sedgwick's No. 1 Morris & Bowie, Section 200, Block 10, E.T. Survey, 13 miles northwest of Albany, Shackelford County, total depth 1,601 feet, pulling big pipe had oil show at 1,385-99 feet, and 600 feet of oil in the hole in 8 hours. It is estimated 25 bbl. well.

Kewanee's No. 5-B Timmis, E.T. Survey, Cooke County, had oil show at 1,164-84 feet, total depth 1,459 feet, initial production 1,600 bbls.

OKLAHOMA

The production at Oklahoma City on July 30 was 28,515 bbls. The Indian Territory Illuminating Oil Co.'s No. 1 Johnson was shut in and was off production. This is the latest producer in that field and the largest.

Magnolia Petroleum Co.'s No. 1 Decker,

(Continued on Page 144)

A.P.I. WEEKLY REFINERY STATISTICS

NEW YORK, July 30.—The weekly report made to the American Petroleum Institute on refinery statistics—crude runs to stills, gasoline stocks and gas and fuel oil stocks—for the week ending July 27 follows:

	(1)	(2)	(3)	(4)
East Coast	100	3,273,000	5,009,000	10,289,000
Appa'achian	86.5	600,600	1,028,000	1,131,000
Indiana, Illinois, Kentucky	94.7	2,024,800	6,053,000	3,468,000
Oklahoma, Kansas, Missouri	73.4	1,725,400	3,373,000	4,309,000
Texas	87.1	3,877,500	4,718,000	12,437,000
Louisiana and Arkansas	90.2	1,124,000	1,805,000	5,424,000
Rocky Mountain	92.3	482,500	1,786,000	653,000
California	97.8	5,177,700	12,170,000	104,781,000
Total United States	91.9	18,285,500	35,942,000	142,492,000
Texas Gulf Coast	99.3	3,015,300	3,985,000	9,708,000
Louisiana Gulf Coast	100	862,400	1,602,000	4,512,000

(1) Per cent refinery capacity represented. (2) Crude runs to stills. (3) Gasoline stocks. (4) Gas and fuel oil stocks.

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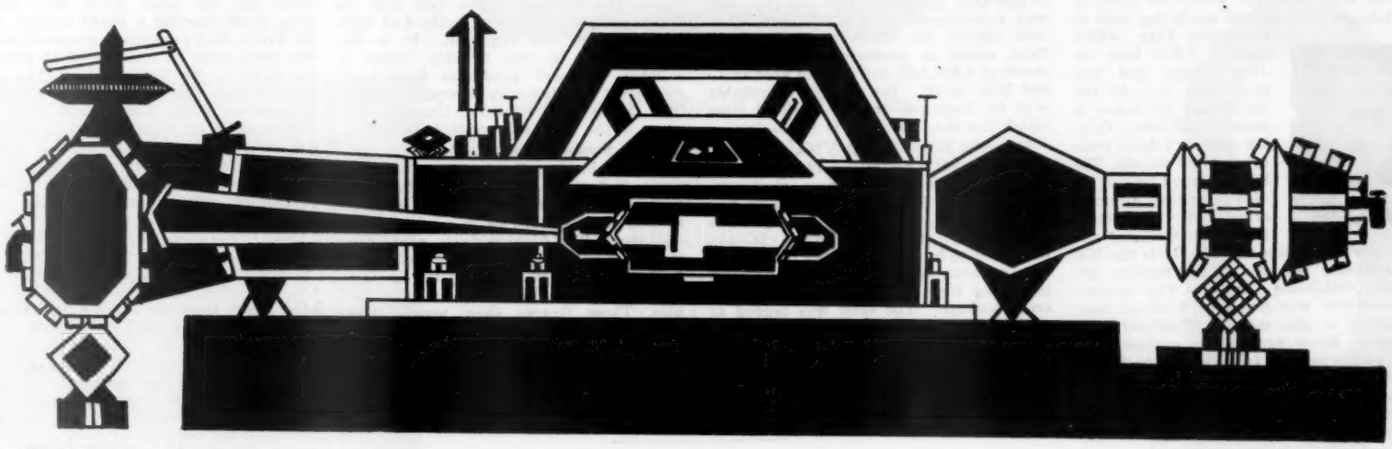
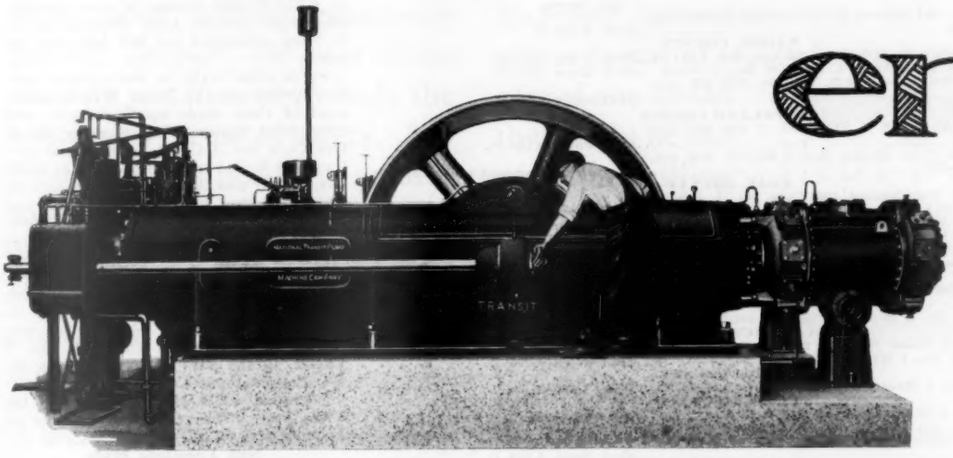


it is a real engine



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Ninth Oklahoma City Producer Is In

No. 1 Johnson, Owned Jointly by Three Oil Companies, Pinched in After Producing 8,355 Bbls. First 11½ Hours

By W. A. Spinney
Staff Correspondent, Oklahoma Fields

The feature of the week's oil news in Oklahoma is the ninth producing well at Oklahoma City, which yielded 8,355 bbls. in 11½ hours, and was then shut in. In the succeeding 24 hours it made 5,227 bbls., flowing against a back pressure of 500 pounds. The test is owned by the Indian Territory Illuminating Oil Co., Foster Petroleum Co., and the Cromwell-Franklin Oil Co. It is the No. 1 Johnson, NE cor. NW, Section 25-11-3w, Oklahoma County. The producing horizon was found at 6,330-55 feet, where it is also making 25,000,000 feet of gas. Many express the opinion that the well would do from 15,000 to 18,000 bbls. of oil a day if opened up, but the owners say that it will not be permitted to make that much. It undoubtedly ranks among the most important oil wells discovered in Oklahoma.

Another well that is stirring interest is the Magnolia Petroleum Co.'s No. 1 Noble, C NW NE NW, Section 30-12-2w, Oklahoma County, which is 5 miles north of the original Oklahoma City field and is the most northern test. It is estimated to have 5,000,000 feet of gas at 6,320-36 feet, and the core showed a good saturation of oil. It is expected to reach the big pay in the next few days.

The field produced 32,100 bbls. of oil on the Saturday, July 27, gauge, compared to 23,031 bbls. the day before, a gain of 9,069 bbls. in 24 hours' time. The gauge on Monday, July 29, was 31,130 bbls.

The Prairie Oil & Gas Co.-Tom Slick Oil Co.'s No. 1 Sudick, C NE NE, Section 8-10-2w, Cleveland County, while drilling the cement plugs at 6,960 feet, is showing considerable gas at a total depth of 6,975 feet. The test is 4 miles south of the main producing field and is the most southerly test in that area.

Increase in Production Predicted.

Several other drilling wells are expected to reach the pay horizon the coming week, and a big increase in production is predicted from this field. Many estimate the daily production at better than 50,000 bbls. by August 15. Most operators express the view that the Oklahoma City Pool will cover several miles.

The gauge of the field on July 29 was as follows:

Company—	Bbls.
Coline No. 1 Olds, 24-11-3w	4,409
I.T.I.O. No. 1 Button, 19-11-2w	5,713
I.T.I.O. No. 1 Fee, 24-11-3w	2,007
I.T.I.O. No. 1 Johnson, 25-11-3w	3,464
I.T.I.O. No. 1 Watters, 25-11-3w	2,485
Mid-Kansas No. 1 Fortson, 24-11-3w	3,853
Mid-Kansas No. 2 Fortson, 24-11-3w	3,954
Sinclair No. 1 Stamper, 30-11-2w	4,195
Sinclair No. 1 Kinter, 30-11-2w	1,050
Total	31,130

A wildcat test 10 miles east of Oklahoma City, the Mid-Kansas Oil & Gas Co.'s No. 1 Trosper Park, NE cor. NW, Section 19-12-1w, Oklahoma County, cored a sandy shale at 6,158-76 feet with a good showing of oil and gas and is drilling deeper at 6,205 feet. The test, on a 11,000-acre block owned jointly by the Mid-Kansas Oil & Gas Co. and Ramsey Oil Co., will continue to drill ahead, and the owners will not attempt to make a production test until the formation changes.

Deepening Quadruples Yield

Drilling deeper and encountering a sand, the Indian Territory Illuminating Oil Co.'s No. 1 Button, SW cor., Section 19-11-2w, which has been making about 63 bbls., increased its production to 258 bbls. an hour. The new pay sand was encountered at 6,527-33 feet. The well offsets the discovery well in the field, which is producing from a total depth of 6,498 feet and making around 1,900 bbls. daily. The discovery probably will be deepened to the horizon from which the No. 1 Button is producing.

Magnolia Petroleum Co.'s No. 1 Decker, SE SW SE, Section 8-14-4, Lincoln County, is the first Simpson sand producer drilled in the county. The test is only a half mile west of the city limits of Chandler, the county seat. It was estimated to be flowing at the rate of 200 bbls. an hour for the first hour and after producing for two hours was shut in to erect tankage. The sand was topped at 4,935-36 feet. It also encountered a good showing of oil in the Viola lime just above the Simpson. The test will be drilled deeper as soon as tanks and pipe line facilities are available. It is the deepest test in this district, where a number of small producers have been completed together with several dry holes. The Magnolia Petroleum Co. has 600 acres in the block surrounding the test.

Seminole Output Steady

The production of the greater Seminole area, including St. Louis, Asher and Sasakwa, has been holding about even around 400,000 bbls. daily mark, for the last week. The highest day's production for the week was on July 24, when the field made 400,749 bbls. and the low day was July 23, when it gauged 394,763 bbls. These figures show nearly 2,000 bbls. a day less than the preceding week. Most of the decline is in the Mission Pool. All the other pools were about even, some showing a slight decline. The St. Louis Pool production remained about the same, with an increase of 11 producing wells in the Simpson lime. The production from the Simpson lime is nearly as great as in the Wilcox sand. It is the first time in the history of the pool that the daily production has been so nearly the same from these two horizons. Many express the opinion that the Simpson lime production will be greater in the next few months than that from the Wilcox.

No. 1 Varnum, in the NW cor., Section 5-9-5, Seminole County, owned by the Prairie Oil & Gas Co., Tom Slick Oil Co., and Skelly Oil Co., is making 450 bbls. a day from the Hunton and Wilcox sands at 4,312-37 feet, after a 120-quart shot and no water showing. It may be an extension of the Earlsboro or the Searight Pool, or it may indicate that these two pools as now mapped are really one pool. Another possibility is that the well indicates the opening of a new pool between the Earlsboro and Searight Pools. Five new locations are getting under way as the result of this new producer.

Old Wells Drilled to Second Wilcox

During the last two years various old producers have been drilled to the second Wilcox sand in the greater Seminole area. The latest test to drill into the lower Wilcox sand in the Seminole City Pool is the Turman Oil Co.'s No. 1 Cudjo, C SW NW, Section 35-9-6, Seminole County. It was completed for 700 bbls. at a total depth of 4,095 feet, and was making 115 bbls. a day before starting to deepen. The lower Wilcox sand was found at 4,218-32 feet, where it was given a shot of 15 quarts. After cleaning out it is being completed for 300 bbls. on the pump.

Seven other wells in the vicinity have been drilled to the lower Wilcox sand; most of them made small pumpers and some were failures. The Sinclair Oil & Gas Co.'s No. 3 Cudjo, in the same section was drilled to a total depth of 4,228 feet. No oil was found, but it encountered water. It was later plugged back and completed at the old depth of 4,080 feet.

Asher Pool was quiet this week. Most of the operations have slowed up on account of the water intrusion in the Texola Oil Co.'s No. 1 Townsite, in Section 19-6-4, Pottawatomie County. The increase in production in the pool was caused by the Simms Oil Co.'s No. 3 Laster, in the SW NE NE, Section 19-6-4, Pottawatomie County, which is making around 4,200 bbls. a day from the Viola lime. The gauge for the pool on July 29 was 11,017 bbls.

New Locations Made

Several new locations were made last week mostly straight west from the discovery well, but some in the townsite. Tom Slick Oil Co. has staked a location in the NE cor., Section 24-6-3, Pottawatomie County, which is over a quarter of a mile west from production. The Simms Oil Co. has made three locations offsetting wells in the townsite. Superior Oil Corp. has purchased from the Gypsy Oil Co. a three-fourths interest in the Stillman lease just south of the townsite and west of the Laster lease on which the discovery well was drilled. Three locations have been made on this lease, one offsetting the Commercial Development Co.'s well, another offsetting the Texola Oil Co.'s producer, and the third offsetting the Simms Oil Co.'s No. 5 Laster.

The production in the Asher Pool has been holding steady for the last week around 11,500 bbls. daily.

Tidal Oil Co. and others' No. 1 Saunders, SE cor. NW, Section 27-7-4, Potta-

(Continued on Pafe 70)

WILDCAT OPERATIONS IN OKLAHOMA

(Descriptions are East and North unless marked otherwise)

NORTHERN OKLAHOMA

ALFALFA COUNTY

Company, farm and location—	Remarks:
Smith Bros.' No. 1 Forbes, SE cor. NW NW Sec. 12-27-11w	Drlg. 750 ft.
Washoma Oil Co.'s No. 1 Acre, SW cor. NE Sec. 14-24-11w	Rig.

BECKHAM COUNTY

Kay and others' No. 1 Martin, C E half E half NW Sec. 32-8-24w	Rig.
F. Coogan's No. 2 Holmesburg, SE NW Sec. 25-9-25w	Drlg. 2,700 ft.
Producers Exploration Co.'s No. 1 Seidell, SE cor. SW SW Sec. 17-9-22w	Shut down 2,402 ft.
Carson and others' No. 1 Danby, SW cor. SE NE Sec. 20-8-22w	Shut down 1,547 ft.

BLAINE COUNTY

Lowen and others' No. 1 Unknown, NW cor. SW NW Sec. 27-16-11w	Spudded and shut down; renewing leases.
Washoma Oil Co. and others' No. 1 Phillips, C NW SW Sec. 13-19-10w	Drlg. 2,195 ft.

CADDO COUNTY

Abernathy & Brown's No. 1 Horton, SE cor. Sec. 8-6-13w	Shut down 535 ft.
J. B. Bailey's No. 1 Hubbard, C NE NW Sec. 1-10-6w	Shut down 150 ft.
W. J. Hartley's No. 1 Galbreath, SE cor. NW SE Sec. 29-5-12w	Shut down 3,394 ft.

CLEVELAND COUNTY

Daniels & LeWright's No. 1 Vandever, C SW Sec. 15-7-1w	Shut down 3,130 ft.
Phillips Pet. and T. B. Slick's No. 1 Sudick, NE cor. NE Sec. 8-10-2w	Rigging up standard tools 6,960 ft.

COAL COUNTY

Indian Territory Illuminating Oil Co.'s No. 1 Harris, SE NE Sec. 10-1-11e	Shut down 1,975 ft.
W. E. McGraw's No. 1 King, C SW NE Sec. 11-1-8e	Shut down 1,585 ft.
Indian Territory Illuminating Oil Co.'s No. 1 Cook, SW cor. NW Sec. 10-1-11	Drlg. 7,710 ft.
J. S. Cosden's No. 1 Richardson, NW cor. NE NE Sec. 6-2-8	Drlg. 1,900 ft.
McGinley & Sigler's No. 1 Willsey, NW cor. SE SE Sec. 7-2-8	Shut down 1,220 ft.
E. W. Whitney's No. 1 Brown, C SE NE Sec. 10-2-8	Shut down 202 ft.

COMANCHE COUNTY

Muse et al's No. 1 Cross, NW SW SW Sec. 4-1-9w	Drlg. 2,027 ft.
Green and others' No. 1 Wilson, C NE SW Sec. 14-1-12w	Shut down 4,055 ft.

CREEK COUNTY

Shaffer et al's No. 1 Moore, SW SE SE Sec. 8-18-9	Drlg. 1,427 ft.

CUSTER COUNTY

W. E. Witt's No. 1 Wellman, C SE Sec. 1-14-14w	Rig and tools.

GARFIELD COUNTY

E. L. Love and others' No. 1 White, SE cor. NW Sec. 9-24-6w	Shut down 5,566 ft.

GRADY COUNTY

J. V. Bailey's No. 1 Hubbard, C NE NW Sec. 1-10-6w	Spudded and shut down.
J. M. Henry and others' No. 1 Abraham, SE cor. NW Sec. 4-5-8w	Rig.

GRANT COUNTY

Bailey's No. 1 Stover, C SW SE Sec. 20-27-5w	Location.
Baucher et al's No. 1 Deadman, SW SE Sec. 12-28-4w	Drlg. 825 ft.
Cowden and others' No. 2 Vollmer, CEL NE SW Sec. 22-25-4w	Shut down 5,640 ft.

GARVIN COUNTY

Gardner Pet. Co.'s No. 1 Halverson, SW cor. NE Sec. 8-4-2	Drlg. 3,625 ft.

GREER COUNTY

Helmerick & Payne's No. 1 Henck, NW cor. Sec. 23-6-24w	Shut down 485 ft.
I. T. I. O. and others' No. 1 fee, C SW NE Sec. 17-6-24w	Drlg. 1,902 ft.
S. M. Stauffer's No. 1 Castleman, SW NE Sec. 8-4-26w	Shut down 625 ft.

HARMON COUNTY

I. T. I. O. Co.'s No. 1 fee, C SW SE Sec. 17-5-24w	Rig.

HARPER COUNTY

Sinclair Oil & Gas Co.'s No. 1 Howell, C SW SW Sec. 14-26-24w	Rigging up.

HASKELL COUNTY

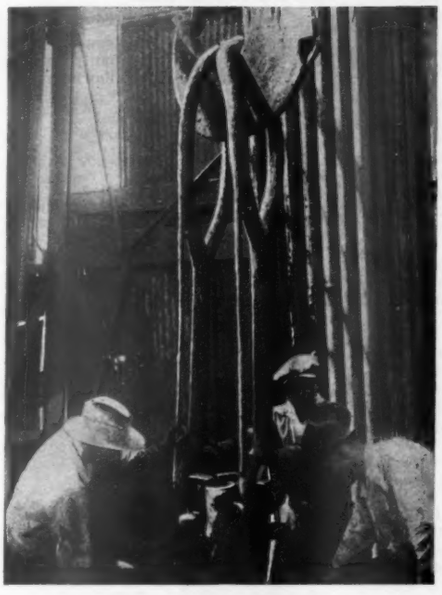
Holden's No. 1 Phillip, SE cor. Sec. 5-9-18e	Shut down; show of gas 1,700 ft.
Marion Oil's No. 1 Sanders, NW NE SW Sec. 10-9-18e	Shut down 2,387 ft.
Sanbolse Gas' No. 1 Unknown, SW NW SE Sec. 32-9-21e	Shut down 2,100 ft.

HUGHES COUNTY

Canady et al's No. 1 Kanard, C SW NW NW Sec. 20-9-12	Location.
Whitney et al's No. 1 Moore, SE SW Sec. 17-5-9	Fishing 3,936 ft.
McGee Co.'s No. 1 fee, SE cor. Sec. 25-8-11e	Drlg. 3,814-36 ft.; hole full water.
The Texas Company's No. 1 Bryan, SE NE SW Sec. 9-6-8e	Plugging back to 2,660 ft.; testing.

(Continued on Page 96)

Weldless "BJ" LINKS



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Kansas Wildcat Shows 51 Gravity Oil

Highest in State Found by Higgins & Steinbuchel's Test in Rice County. Texas Company Completion Extends Robbins Pool

By W. A. Spinney
Staff Correspondent, Kansas Fields

The latest wildcat to show oil in Kansas is Higgins & Steinbuchel's No. 1 Shurr, NE cor. SW, Section 21-20-10w, Rice County. Oil rose in the hole 2,300 feet in 12 hours, and the hole was full of oil in 24 hours, from the pay horizon at 3,278-80 feet. The oil is 51 gravity, probably the highest gravity crude in the State. Operations were shut down to run the 5-inch casing the latter part of last week. A production test will be made and the well will be drilled deeper in the pay horizon, which has not been identified.

A new extension to the Robbins Pool, 4 miles south of Wichita, has been drilled in by The Texas Company. The well made 580 bbls. in 24 hours. The test is the first important extension to the pool which was discovered several months ago by George Dickey and Shell Petroleum Corp.'s No. 1 Robbins, NW cor. SW, Section 21-28-1, Sedgwick County. The discovery well still is making 300 bbls. a day. The Texas Company's well is located in the NW cor. SW SW, Section 21-28-1. It had the top of the lime pay at 3,088-93 feet, where it filled up with 1,500 feet with oil over night, and later a production test was made.

G. L. Ramsey and others' No. 1 Townsite in Section 15-26-2, Sedgwick County, in the Greenwich Pool, was drilling at 2,940 feet and has not reached the chat. Some predict it will be the first dry hole in the townsite. Others believe it is having trouble with a crooked hole. If the test is dry in the chat it will be drilled to the Wilcox sand. The Derby Oil Co.'s No. 1 Hadlik, in the townsite, is still holding its production. It made 822 bbls. showing about 1 per cent water and is the most recent completed well in the townsite.

Tidal Gets Hole Full of Water

Sedgwick County production received a setback when the Tidal Oil Co.'s No. 1 Duncan, SW cor. SE, Section 31-25-2e, found a hole full of water in the chat at 3,020-21 feet. This well is a direct offset to the Patton & Wentz well in Section 6-26-1, Sedgwick County, which is still producing 100 bbls. a day from the same formation.

Sumner County added to its production by completing two new wells. Continental Oil Co.'s No. 2 Spentz, NE cor. SE NE, Section 27-34-2, swabbed 100 bbls. from the lime pay at 3,455-3,518 feet. Champlin Oil Co.'s No. 2 Love, NE cor. NW SW, Section 9-30-2w, in the northwestern part of Cowley County, had chat pay at 3,020-45 feet and made 75 bbls. after a 30-quart shot.

The best producing well in Kansas is the Gypsy Oil Co.'s No. 1 Williams, Section 16-35-3w, Sumner County, 3 miles southwest of Caldwell. It is producing from the Wilcox sand at 4,762-84 feet, from which it has flowed over 108,849 bbls. of crude oil in the last three and one-half months. The test started to produce on April 12 and it has produced more oil than any other well in Kansas in the last year. The oil tests 46 gravity and is the highest gravity oil ever found in the State in such large quantities. The gauge of July 27 was 845 bbls. It was only a week ago that the production fell below 1,000 bbls.

Several Offsets Started

The producer caused several offset tests to be started. Three are direct offsets. The west offset is the Gypsy Oil Co.'s No. 1 Gibson in Section 17-35-3w, Sumner County. It is drilling at 4,615 feet and is expected to reach the Wilcox sand in a few days. The Gypsy Oil Co.'s No. 1 Enerud, SW NW NE, Section 17-29-4w, Grant County, Oklahoma, is drilling at 4,448 feet. The other offset is being drilled by the Amerada Petroleum Corp. in the SE NE NW, Section 17-29-4w, Grant County, Oklahoma. It is drilling at 4,050 feet. Gypsy Oil Co. is also drilling another wildcat test in Sumner County, several miles north of the producer, No. 1 Bobeck, in Section 27-34-4w, which was expected to reach the Wilcox sand this week. On July 26 it was drilling at 4,740 feet.

McPherson County is the most active county from a wildcat development standpoint in the State. It has 21 operations within its boundaries including drilling wells, rigs, locations, and tests that are shut down. The county at this time has only one producing well of major importance. It is owned and operated by the Shell Petroleum Corp. in Section 1-20-2w. Elsewhere in the county large gas wells have been completed. These have been shut in for want of a market. The Shell Petroleum Corp.'s well has been averaging 1,050 bbls. daily pinched in.

Ellis County Ranks Second

Ellis County ranks second in wildcat activity. Eight operations are under way. The county has three producing wells, all owned by the Phillips Petroleum Co. Two are in the eastern part of the county and the other is in the western part. The Phillips Petroleum Co.'s No. 1 Heider, NE cor. SW, Section 8-12-17w, is exploring the deeper horizons. The test is straightreaming 6-inch casing at a total depth of 3,700 feet and will probably be drilled to the granite unless production is found in some other horizon.

Brown and others' No. 1 Gerstner, SE cor. SW NW, Section 13-13-18w, Ellis County, a wildcat test north of Hays, has been abandoned at 4,010 feet. The test is the deepest hole in this part of the county.

Trego County, which joins Ellis County on the west, created excitement early in the summer upon completion of a wildcat well owned by the Central Commercial Oil Co. It drilled into the pay at 3,500 feet and made 165 bbls. a day on a test. The well has been averaging 60 bbls. a day for the last few weeks pumping. The oil is being shipped out in tank cars from a loading rack about 4 miles from the well. No new activity has started in the vicinity. Most of the companies holding acreage in that area are waiting to see what the well will do before drilling on their acreage.

Barbara Oil Co.'s No. 1 Angel, C NW NE, Section 14-33-13w, Barbara County, has 3,000,000 feet of gas at 4,550-58 feet, and a show of dead oil. The test is drilling deeper at 4,612 feet, and will explore all the deeper horizons.

Shows Oil, Gas and Water

Another wildcat test in Barbara County is showing oil, gas and water in the deep horizon. It is being drilled by Rowland and others in the NE cor. NW NE, Section 27-30-14w, in the northern part of the county. The showing was encountered in what is supposed to be the Wilcox sand at 4,722-34 feet. It is being bailed to test for production. This wildcat drilling well had been previously reported as being abandoned at 4,708 feet.

The production in Sedgwick County shows a gain over the preceding week. It has been slowly increasing since the discovery well was completed in the Valley Center Pool on August 8, 1928. Since that time 112 producing oil and gas wells have been completed, making that county the most active in the State.

Sedgwick County Production

The production by companies and leases in the Sedgwick County area for July 27, is shown by the following:

County, lease—	S.T.R.	Wells	Bbls.
Aladdin:			
Bennington	6-26-1	2	565
Barnsdall:			
Samuel	24-25-1	1	Off
Bu-Vi-Bar, et al:			
Branch	6-26-1	2	736
Bright "A"	6-26-1	2	224
Bright "B"	6-26-1	5	1,915
Byers	7-26-1	1	126
Emrich	6-26-1	2	615
T. Goodrich	6-26-1	5	439
Lantz	12-26-1w	2	60
Corr	1-26-1w	6	3,923
Lyons	7-26-1e	3	2,452
Miles	7-26-1	1	65
Reed	1-26-1w	3	850
Roll	7-26-1e	1	389
Rothfuss	6-26-1e	1	9
Shawver	7-26-1e	8	5,453
Wright	12-26-1w	5	4,972
Woodward	7-26-1e	1	304
Connell:			
Cross	27-25-1w	1	10
Continental:			
Goodrich	16-25-1e	2	662
No. 1 Black	16-25-1	1	163
Davis-Skelly:			
Wilson	1-26-1w	10	3,060
T. M. Deal:			
No. 1 Townsite	15-26-2	1	337
Derby:			
Bowling	6-26-1e	1	94
Gorman	6-26-1e	4	1,412
Hadlik	15-26-1	1	810
Dickey et al:			
Robbins	21-28-1e	1	312
Dickey:			
Nolan	21-28-1	1	177
Gypsy:			
Hammant	14-26-2e	3	350
W. F. Kinney:			
1 Richards	15-26-2	1	1,200
Mars Oil Co.:			
Fl.ch	2-26-2	1	368
Mary Jane:			
Fitch	6-26-1e	2	721
Montour:			
Lavender	6-26-1e	2	1,120
Patton & Wentz:			
Swenson	6-26-1	1	100
Phillips Pet. Co.:			
Difford	1-26-1w	5	158
Piefer	6-26-1e	1	116
Plains Oil:			
No. 1 Plains	15-26-2	1	442
Prairie:			
Cross	27-25-1w	1	11
Swyser	36-25-1w	3	330
Producers & Refiners:			
Kuske	24-25-1	1	160
Pyle & Sutter:			
Caldwell	6-26-1e	2	301
Reynolds & Hays:			
Roll	7-26-1	1	583
Robertson et al:			
Creson	6-26-1	1	828
Shell:			
Fisher	15-26-2	1	179
Lygrisse	15-26-1	1	276
No. 1 Community	15-26-2	1	1,150
Nolan	21-28-1e	1	114
Stearns & Streeter:			
Roll	7-26-1	1	593
Texas:			
Blood	21-28-1	1	325
Tidal:			
Scherger	6-26-1	3	224
Vickers:			
Nessen	6-26-1	3	315
Wentz:			
No. 1 Bright	1-26-1w	1	800
White Eagle:			
Baylor	6-26-1	1	18
Robbins	20-28-1	1	124
Total		112	41,242

Dickinson County Test Interesting

Milmac Oil Co. and others' No. 1 Beihler, SW cor. NE, Section 28-16-4, Dickinson County, is one of the interesting tests now drilling in Kansas. It is being drilled in a "sink hole," 3½ miles southwest of Herington. This peculiar formation has been a puzzle to geologists ever since the oil boom in Dickinson County, over 10 years ago. At that time this locality was surveyed by geologists and various theories advanced concerning it, but at that time nobody presented a logical reason for drilling it. Recent-

(Continued on Page 116)

WILDCAT OPERATIONS IN KANSAS

(Descriptions are East unless otherwise marked)

Company, farm and location—	Remarks:
BARBER COUNTY	
Skelly Oil Co.'s No. 1 Temple Ranch, Sec. 13-34-15w	Drlg. 1,500 ft.
Barbara Oil Co.'s No. 1 Angel, NW cor. NE Sec. 14-33-13w	Cemented 8-in. csg. 4,486 ft.
Robertson et al's No. 1 Powell, SE cor. SE Sec. 11-32-10w	Spudding.
Allison & Fitzwilliams' No. 1 Morrisse, C NW SE SE Sec. 9-30-12w	Underreaming 8-in. csg. 3,540 ft.
BARTON COUNTY	
Everett & Wiley's No. 1 Ward, NW cor. SW Sec. 12-20-13w	Shut down 3,948 ft.
BUTLER COUNTY	
Milmac Oil Co.'s No. 1 Clearwater, SW cor. Sec. 33-25-3.	Spudding.
Lario Oil & Gas' No. 1 Gordon, NW cor. Sec. 15-26-3	Spudding.
Sinclair Oil & Gas' No. 1 Johnson, NE cor. Sec. 16-26-3.	Drlg. 450 ft.
Empire O. & R. Co.'s No. 1 Parks, NE NW Sec. 36-29-4	Drlg. 745 ft.
Arkansas Natural Gas' No. 1 Campbell, SE cor. Sec. 9-26-3	Spudding.
White Eagle's No. 1 Bachelder, SW cor. Sec. 17-25-3e	Drlg. 2,770 ft.
Crawford et al's No. 1 Thompson, NW cor. SW Sec. 2-24-3e	Drlg. 2,020 ft.
Aladdin Petroleum Co.'s No. 1 Bronsenger, NE cor. NE SW Sec. 24-27-3	Setting 8-in. csg. 2,430 ft.
CHASE COUNTY	
Marland Prod. Co.'s No. 1 Hiatt, SW NE Sec. 8-31-5e	Hole full water 3,171-78 ft.; abandoned.
COWLEY COUNTY	
Landon & Slick's No. 1 Daniels, NE SE Sec. 6-30-5e	Drlg. 1,475 ft.
J. B. Markley's No. 1 Tatum, SE cor. SW Sec. 11-31-6	Shut down 520 ft.
DICKINSON COUNTY	
Cress & Hawky's No. 1 Menli, NE cor. Sec. 12-15-2	Rig.
Johnson's No. 1 Doetwiler, SW NE NW Sec. 32-16-4e	Shut down 3,020 ft.
Prairie Oil & Gas Co.'s No. 1 Morgan, NW cor. Sec. 26-16-3e	Drlg. 2,423 ft.
Milmac's No. 1 Biehler, SW NE Sec. 28-16-4e	Drlg. 2,570 ft.
ELLIS COUNTY	
Phillips Pet. Co.'s No. 1 Harder, NE SW Sec. 8-12-17w	Drlg. 3,890 ft.
Byrens et al's No. 1 Fisher, NW SE Sec. 4-11-20w	Rig on ground.
T. C. Johnson's No. 1 Robbins, SW NW Sec. 15-14-16w	Hole full water 3,468-78 ft.; total depth 3,502 ft.; abandoned.
John Brown's No. 1 Gestner, SE cor. SW NE Sec. 13-13-18w	Shut down 4,080 ft.
Rush Oil Co.'s No. 1 Gatewood, NW cor. NW Sec. 4-15-20w	Fishing 2,555 ft.
Finney & Weiner's No. 1 Freeman, NE cor. SW Sec. 24-15-20w	Spudded and shut down.
Phillips Pet. Co.'s No. 1 Johnson, SW cor. NE Sec. 9-13-19w	Drlg. 3,593-95 ft.; swabbed 624 bbls. in 33 hrs.; 1,100 bbls. in stock tanks.
Phillips Pet. Co.'s No. 1 Schneider, NW cor. Sec. 20-12-17w	Drlg. 3,429-39 ft.; 108 bbls. in 8 hrs.; shut down.
Burger et al's No. 1 Hadley, SW cor. SW NW Sec. 20-11-17w	Drlg. 3,212 ft.
ELLSWORTH COUNTY	
The Texas Company's No. 1 Sherman, NE SW Sec. 16-17-6w	Drlg. 1,000 ft.

(Continued on Page 95)

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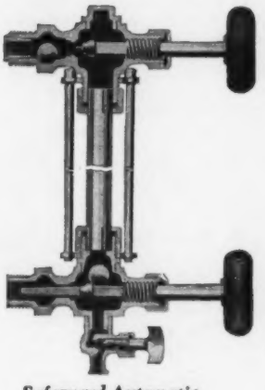

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San Antonio Territory Getting Play

Darst Creek Pool and New Serpentine Pool in Caldwell County Are Interesting Southwest Texas Operators

By B. D. Stevenson
Staff Correspondent, Southwest Texas Fields

SAN ANTONIO, Tex., July 29.—The feature of the week in Southwest Texas, the San Antonio territory, is the growing intensity of the lease campaign a little farther removed from the Balcones fault to the southeast than has been the custom in past campaigns. The Texas Company's No. 1 Dallas Wilson which opened the Darst Creek Pool, A. G. Kieffer's No. 1 Dix that late last week after standing shut down developed a considerable amount of gas, and Al Buchanan's No. 1 L. K. Brown in Caldwell County, discovery well of a new Serpentine plug, have all contributed somewhat to the new play which is somewhat of a scramble with prices from $5 to $50 an acre being paid for wildcat stuff. Big companies are taking any acreage that looks like possible territory and will work out the geology more carefully later.

Just how much the Keiffer gas well has had to do with the new activity may not be known for a time. Heretofore the tendency has been to work the territory along the Wilcox outcrop for the production in the older formations such as the Edwards lime. Due to a sharp dip in formations beginning about at the city of Luling the territory to the east and southeast has been neglected, due to the Edwards lying pretty deep. Now the idea seems to be to work this territory to the southeast for production in younger formations, which will be had at ordinary depths in the belt just to the east and southeast of the old belt. At the same time the play for the Edwards lime is to continue. This activity extends from Bastrop County on the north and south and southeast and west around into Medina County. The Elbow of the Balcones fault is north of San Antonio at which point the line of the fault in a general way is due west.

Darst Creek Pool

Fifteen new locations have been made in the Darst Creek Pool and that field will be drilled up at once. Major companies want the high gravity oil to be had from the pool and there is no thought of any unit development. The Texas Company's No. 1 Dallas Wilson, discovery well of the pool, is flowing around 800 bbls. a day with the bailer in the hole to restrict the flow a little and waiting on pipe line connection. The Texas Company has so mpuch acreage in this pool that will undoubtedly be productive that the chances are it will provide a line to take care of its own production. In the Joe Bruner Pool 10 miles northeast The Texas Company has only a little production and one of the other pipe lines is taking its oil. The Texas Company has only about 900 bbls, a day from that pool. Shell Corp. has about 9,500, Humble Oil & Refining Co. on its own account and in partnership with Luling Oil & Gas Co. about 23,000 bbls., and Gulf Production Co. about 13,000 bbls.

In the new pool, Humble, Gulf, The Texas Company, Magnolia, United North and South and Empire Gas & Fuel companies are all likely to develop considerable production. All have pipe lines or loading racks on the railroads at Luling for handling the Bruner Field oil except the North and South and Empire Gas & Fuel and The Texas Company. The Texas Company's line from West Texas to Houston runs across the northern part of Caldwell County about 25 miles north of the new pool and its spur from that line down to the refinery at San Antonio, which is completed and ready to begin operating, is about the same distance west of the field. Humble has a line from the Bruner Field to West Columbia and would need to build only about 12 miles of line to connect the new field with it. Magnolia has its line from Laredo to the Luling tank farm near the new pool. The Magnolia's Luling tank farm with a line running east to Hull is only 10 miles from the Darst Creek Pool.

The hottest spot in the new lease activity is in the strip of territory about 2 or 3 miles wide and lying a little to the southeast of the Darst Creek proposition, possibly a couple of miles distant.

Caldwell County Pool

The new Serpentine Pool discovered by Al Buchanan in Caldwell County is approximately 2½ miles southwest of the Dale Field and the discovery well is in the C. M. Cannon Survey and 150 feet from approximately the center of the southwest line of the survey. It is expected there will be from 250 to 400 acres in this new Serpentine Pool, though there is room for even more of a pool. Al Buchanan owns the acreage that is expected to cover the bulk of the pool. The tests in that area are very quickly drilled. Buchanan drilled the discovery well in 4 days. Drilling is fairly inexpensive and the production is quite profitable, the oil being 36.4 gravity not corrected. Buchanan topped the Serpentine at 1,740 feet and at 1,764 feet it bailed at the rate of 50 bbls. a day. He has deepened to 2,050 feet and is still in Serpentine. At this depth it is believed the well initially will pump around 150 to 200 bbls.

Another Gas Blowout

W. J. Walton's No. 1 Nolte, south of Seguin in Guadalupe County, dry and abandoned with sulphur water in the Edwards lime at 2,071 feet, blew out with a little gas late last week. This test attracted some attention when it had a sand at 1,450-68 feet that on a drill stem test was estimated at about 500,000 feet. It had a stain of oil also in the adobe. After being plugged at the bottom and abandoned it blew in undoubtedly from the gas sand at 1,460-68 feet. This test is located so as to be in the line of play of the old Luling Field and it probably will help to work out the structure in that area. There has been wildcatting around there ever since the old Luling Field was discovered with some favorable showings at times but thus far with no development of production.

In the Joe Bruner Field, other than the completion of several wells, there was nothing developed the past week of interest. Production of the field is running above 50,000 bbls. a day. John Callahan's No. 1 Ellison, 2 or 3 miles northeast of the Bruner Field and in line with the trend, is down 1,350 feet in shale and boulders. The next news of importance from it will be the top of the chalk which in the Bruner Field is had at around 2,300 feet. There is a little more favorable opinion as to the Bruner Field extending on to the northeast than there was at one time.

Frazier, Radcliff & Noonan are going to drill a test north of Lockhart in Caldwell in a territory where there is believed to be a structure and dry holes drilled in past years seem to prove it and have about narrowed the territory down to where the new test should go into the pay.

In Bastrop County Pacific Oil & Gas Co. is starting a test on the Spooner land near where Alexander-Liles drilled a couple or three years ago and got a showing.

Hamilton & Kennon are starting an Edwards lime test in Bexar County near Gas Ridge.

Blanco County, which has been hanging along ever since Rodson got a showing of oil in his No. 1 Glasscock south of Johnson City, six months or more ago, is beginning to pick up. Forbes' No. 1 Bruckner, a half-mile south of Johnson City, is down nearly 600 feet and Ashe and associates are to start soon 3 miles south of him and J. Behning is getting ready to start 10 miles east of Johnson City. The Rodson test bailed some oil six months ago but has been standing and the understanding is will be plugged or something done with it to assure that water will not get into the oil sand.

Laredo District

Humble Oil & Refining Co.'s No. 29 Kohler on the southeast flank of the gas area in Duval County on the Kohler ranch is a 10-bbl. oil well at 1,812 feet with about 6 feet of sand. Also No. 30 Kohler, 2 miles south of it and in the northwest corner of Survey 169, is being put on the pump at total depth of 1,767 feet where it tested 40 joints of oil. No. 29 Kohler is a north offset to No. 24 Kohler which was brought in a few weeks ago making a little oil and considerable salt water and half way between it and No. 30 Kohler is No. 28 Kohler which is a gas well at 1,787 feet. Humble Oil & Refining Co. developed quite a number of gas wells in that area at approximately the same depth as these oil wells, the oil wells being the first oil production to be developed in that territory.

Outside of this new oil well the Laredo district made a few new locations, Foster Barnsley's No. 6 Webster being in the oil producing part of the Carolina-Texas gas field, G. M. Partee made a new location in the Schoolfield-O'Byrne Pool, Smith & Adams made a wildcat location in Starr County and Alworth-Stevens-Hild Co. made a location in the Alworth Pool.

Magnolia Petroleum Co. got a dry hole at 2,358 feet, the producing depth of the field in its No. 1 M. Benavides north of the gas area in the Magnolia-Cole Field in Webb County. The test is a half mile north of the Magnolia's No. 1 Volpe which is a gas well at about that depth, the Volpe being near the center of the south line of the survey and No. 1 M. Benavides about the center of the survey. No. 1 M. Benavides is now drilling at 3,100 feet. Its dryness at 2,358 feet tells where the extension of the gas field need not be looked for but there is every chance the field has not yet reached its limits on the north and may shy off to the northeast as most of the fields do in through Webb and Duval Counties.

H. Muckelroy, Jr., got salt water instead of oil in his No. 2 Trevino in the new pool area he opened up southeast of the Jennings gas field in Zapata County. No. 1 Trevino, 2 feet in the sand at about 1,300 feet, has been pumping 28 bbls. of oil. No. 2 Trevino, 300 feet south, is a salt water well at 1,300-1,307 feet, and

(Continued on Page 113)

WILDCAT OPERATIONS IN SOUTHWEST TEXAS

ATASCOSA COUNTY

Tom Draper's No. 1 McCoy, Sur. 234 ..... Location.
Amphion Oil Co.'s No. 1 Sam Schlisser ..... Shut down 2,300 ft.; repairing rig.

BASTROP COUNTY

Gypsy Oil Producing Co.'s No. 1 Lottman estate ..... Drlg. 2,710 ft.
Gulf Production Co.'s No. 2 Bell, Riley Sur. ..... Location.
Jim Harper and others' No. 1 R. R. Mitchell ..... Derrick.
Howell Oil Corp.'s No. 1 F. Wichman ..... Drlg. 1,700 ft.
Humble Oil & Refining Co.'s No. 1 B. Haywood ..... Formation test will not be reported.
Pacific Oil & Gas Co.'s No. 1 Spooner, Leverenz Sur. .... Drlg. 450 ft.
Moore & Ortman's No. 1 Ortman, Andrew Graham Sur. .. Location.
E. W. Ogden's No. 2 M. M. McCall, Stephen F. Austin Sur.. Drlg. 2,912 ft.
Frank Rundus' No. 1 fee ..... Drlg. 700 ft.
Superior Oil Co.'s No. 1 R. J. Moore, J. Raines Sur. ..... Location.

BEXAR COUNTY

Balcones Oil Corp.'s No. 1 F. A. Jackle ..... Coring 1,824 ft.
Guy S. Fisher's No. 1 S. L. Beck, P. W. Hays Sur. ..... Location.
Hamilton & Kennon's No. 1 Hamilton, near Gas Ridge .. Spudded in.
Indian Creek Oil & Gas Co.'s No. 1 W. Wolfsohl..... Abandoned.
Moore-Jauer's No. 1 Holly R. Ellison..... Drlg. 1,560 ft.; good oil showing.
Mrs. A. R. Garrett's No. 1 Ponciano Pena ..... Drlg. 540 ft.
J. Morgan Russell's No. 1 G. A. C. Halff ..... Dropped from reports.
E. G. Potter's No. 1 Watson, B. Martinez Sur. ..... Drlg. 1,488 ft.

BLANCO COUNTY

J. Bekning's No. 1 Butler, Butler Sur. ..... Moving in machinery.
J. E. Forbes and others' No. 1 E. Bruckner..... Drlg. 524 ft.
Ashe & Marshall's No. 1, 5 mi. S Johnson City ..... Location.

BROOKS COUNTY

Milam Drlg. Co.'s No. 4 Riley Allen ..... Formation test, spudded.
A. W. Dinn's No. 1-B Garcia..... Waiting on fuel 450 ft.
Houston Oil Co. of Texas' No. 1 Lassiter, Survey 69..... Standing 3,000 ft.

CALDWELL COUNTY

Frazier Radcliff & Noonan's No. 1 Cardwell, Bell Sur.... Rigging up.
H. C. Ratcliff's No. 1 J. E. Cardwell, J. P. Bell Survey... Location.
Cranfill & Reynolds' No. 1 Dauchy ..... Moving in rig.
John T. Callahan and others' No. 1 W. Ellison..... Drlg. 1,350 ft.; shale and boulders.
M. O. Rayor's No. 1 J. Keefer..... Drlg. 2,540 ft.
J. S. Brutsche's No. 1, R. L. Quinn Sur. ..... Location.
Al Buchanan's No. 1 K. L. Brown, C. M. Cannon Sur. .... Drlg. 1,762 ft.; showing oil.
Russell's No. 1 Hill, McCullough Survey..... Abandoned.
Whittington and others' No. 1 J. G. Horner..... Drlg. 1,600 ft.

COLORADO COUNTY

Cagle-Concord Oil Co.'s No. 1, Sec. 42 ..... Spudded in.

DUVAL COUNTY

Magnolia Petroleum Co.'s No. 1 Corbett, Sur. 96 ..... Drlg. 2,136 ft.

EDWARDS COUNTY

A. M. Griffith's No. 1 Wardlaw..... Drlg. 2,410 ft.

FAYETTE COUNTY

Magnolia Petroleum Co's No. 1 Henry Gully ..... Drlg. 1,065 ft.
National Oil Co.'s No. 1, A. Hanger Williams League.... Set 70 ft. surface csg. on rock.
W. J. Kelly's No. 1 Burke..... Changing to heavier rig 280 ft.
Marshall & Moore's No. 1 John A. Kerr..... Drlg. 2,485 ft.

GONZALES COUNTY

Alexander & Smith's No. 1 Billings..... Abandoned.
Joe Bruner's No. 1 R. D. and J. C. Miller..... Moving in boiler 2,712 ft.
Crown Petroleum Co.'s No. 1 Hattenback..... Rebuilding derrick 2,257 ft.
Finnell & Elam's No. 1 Robinson, Liverpool Survey..... Set additional string csg. 1,040 ft.
Hoffman and others' No. 1 Steubing, John Smith Survey.. Drlg. 210 ft.
Linderman Brothers' No. 1 F. H. Frampton..... Drlg. 1,000 ft.
Fort Bend Oil Co.'s No. 1 C. E. Ham..... Drlg. 2,650 ft.
Frank Sorrell's No. 2 Wilkenson..... Standing 174 ft.

GUADALUPE COUNTY

W. E. Clark and others' No. 1, Survey M. Miller..... Location.

(Continued on Page 120)

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Dixie Area Has Three Completions

Richland Field Has Its Fourth Crater. Monroe Well Blows Out and Catches Fire. Production Drop.

By D. H. Bancroft
Staff Correspondent, Louisiana-Arkansas

SHREVEPORT, La., July 27.—With all its uncertainties the Dixie district of Caddo Parish, like Champagnolle, before it—which has the same characteristics—remains the most active area of the Shreveport district, excepting of course the Monroe-Richland gas areas which preparations to supply increased pipe line demands maintain as the busiest part of the division. With it, this week, Mount Holly Pool of Ouachita County, Ark., shared the spotlight by virtue of two lease trades involving sizeable amounts. Dixie had three successful completions during the week which added 105 bbls. to its total initial capacity and, including two wildcats, five new jobs. Richland fell heir to another crater and the Monroe area had its thrill in a burning well.

Mount Holly having fallen into a state of innocuous deseutude during the last month, Houston Oil Co.'s purchase of the NW SW, Section 25-15-8, McDonald Brothers' Wilson "B" lease, with its three wells producing around 700 bbls. net oil per day for a price not revealed, was something of an event. Houston, being on a trade for some more stuff in the area declined to let it be known what it paid for the property. Its 4-inch line from the pool to the refinery at Cullendale (Camden) was completed Friday July 26, and was scheduled to make the first run of its own since the purchase referred to, and outside oil today.

This trade was followed a few days later by Root Refineries, Inc., purchase of the SE SW, Section 26-15-18, for $300 cash and $300 out of the first oil per acre and the SE NW, Section 35-15-18, for $250 cash and $250 out of the first oil.

Dixie district's three completions were Gulf Refining Co.'s No. 3 Oden, NE NE, Section 18-19-14, pumping 20 bbls., total depth 2,411 feet, Palmer Corp.'s No. 1 Hunter, SW SW, Section 8-19-14, a slight northern extension, pumping 40 bbls. from 2,401 feet and Standard Oil Co.'s No. 5 Hunter, Section 17-19-14, 50 bbls. natural from 2,411 feet. The new jobs are Gold & Sklar's No. 3 Hunter, SW NE, Section 17-19-14, and No. 5, same lease and quarter section; Haynes Brothers' No. 1 Oden, NE NW, Section 19-19-14, wildcat; Lide and others' No. 1 Hunter, NW NW, Section 22-19-14, wildcat; Ray-Dawes Drilling Co.'s No. 2 Hunter, SW SW, Section 9-19-14, wildcat.

The Oil City district of Caddo Parish had two completions, W. D. Chew's No. 1-B Fee, Section 33-21-16, pumping 15 bbls. from 1,855 feet and Shreveport Oil Corp.'s No. 3 Huy, Section 32-21-15, 25 bbls. from 2,126 feet, making a total of 150 bbls. per day new production for Caddo during the week.

Richland's Fourth Crater

Richland's fourth crater developed when Northern Louisiana Natural Gas Co.'s No. 3 Boykin, Section 20-17-6, a relief well to the cratered No. 1 Boykin, blew out with seepage gas from 908 feet. There is danger of the two craters spreading into one, in which case the "Siamese Twins" will be the largest crater in this division, excepting possibly the Murphy No. 1 of the old Oil Operators Trust Co. in Union County, Ark., which preceded the Smackover discovery producer. No. 3 Boykin duplicated the performance of Natural Gas & Fuel Corp.'s (Arkansas Natural Gas Corp.'s) 2-C Thompson, Section 21-16-6, a relief well to No. 1-A, which cratered under pressure of 65,000,000 feet of gas early in 1928. The crater filled a fresh water sand at around 300 feet with gas and created the finest example of a geyser known outside of Yellowstone Park and Iceland. No. 2 Boykin, another relief well, cemented surface string and No. 4, which will replace No. 3, is rigging up.

The first wild well that has developed in the Monroe district for several years happened when Consolidated Carbon Co.'s No. 2 J. White, Section 16-20-4, Morehouse Parish, blew out with an estimated 65,000,000 to 70,000,000 feet of gas from the shallow sand between 200 and 300 feet and caught fire. In most cases drillers have been able to get through this wild gas and cement their surface string below it. The plan didn't work in this instance. Apparently there is nothing to be done about it except to let it burn itself out, for no one has ever devised a means of setting casing above this grass roots stuff. There isn't anything sufficiently stable or solid to anchor it to. Several attempts to save this shallow gas by cementing below it and perforating, inserting two or three joints of perforated pipe or screen in the casing string, and other methods have been discussed but a successful scheme is yet to be demonstrated.

New Gas Wells

News from Monroe and Richland wasn't all of accidents, however. In the former district Mack & Pipes' No. 1 A. White, Section 7-18-5, Ouachita Parish, was an 8,000,000-foot gasser at 570 pounds, total depth 2,215 feet and Southern Carbon Co. completed No. 53 Fee, Section 23-19-4, making 1,500,000 feet at 525 pounds from 2,234 feet. E. S. Hall made a 37,000,000-foot producer of No. 2 Spencer, Section 36-21-3, Union Parish, total depth 2,131 feet and Interstate Natural Gas Co.'s No. 1 Parks, Section 23-20-3, gauged 5,000,000 feet, total depth 2,146 feet. Richland Parish's contributions were W. C. Feazel's No. 1 McCoy, Section 33-16-6, 34,500,000 feet, total depth 2,452 feet and Southern Carbon Co.'s No. 1-B Tegola, Section 4-15-6, salt water at 2,505 feet. This last well had tested a quarter million feet of gas at 2,461 feet, made 16 feet more hole and tested the same amount of gas—with the addition of 3,000 bbls. of salt water. It is an east offset to the same company's No. 1 Tegola, in Section 4, which gauged 46,000,000 feet at 2,476 feet; hence the feeling of security with which No. 1-B was deepened the extra 16 feet and then on to its final depth.

In the north end of the field where each well is more than ever a problem differing from anything that has gone before it, contrary to experience farther south, Palmer Corp.'s No. 1 Louisiana Petroleum Co., Section 22-17-6, is going deeper. This well, completed by Louisiana Petroleum Co. in September, 1927, as No. 1 Binion & Sartor, was finished as a 5,000,000-foot producer at 1,050 pounds, total depth 2,476 feet. The last regauge of the field gave it 1,000 pounds rock pressure and a volume of 4,762,000 feet. Two good wells adjoin it on the west and southwest from a few feet shallower total depth. Hope Producing Co.'s No. 1 Eubanks, Section 26-17-6, was dry at 2,450 feet where it might have been expected to produce, and was drilling on a rock at 2,476 feet, another instance of the anomalies existing in this part of the field to which reference was made last week.

The Urania district of LaSalle Parish produced the two best wells in the entire division, old as it is. They were O. W. Clark's No. 8 Tullos, Section 23-10-1e, pumping 150 bbls. from 1,490 feet, and Louisiana Oil Refining Corp.'s No. 39-B Tremnot, Section 25-10-1e, pumping 120 bbls. from 1,530 feet. Cotton Valley's deep Trinity gas horizon gave Palmer Corp. 1,500,000 feet of gas through No. 5 Tillman, Section 27-21-10, total depth 4,081 feet. No. 4, same lease and section, made 22,000,000 feet of gas at 1,750 pounds from 4,625 feet seven months ago and is still holding up very close to both figures. The Bethany district of Panola County, Tex., had one small completion, The Texas Company's No. 12-A Adams, S. B. Lacy Survey, gauging 500,000 feet, total depth 957 feet. Bailey & Trimble decided not to skid derrick and start new hole for No. 1 ElDorado Realty Co. in the NW NE, Section 7-17-13, east extension of Champagnolle, but abandoned the test as a junked hole at 768 feet.

Production Decline

Daily average runs from the field, practically stationary for the two weeks ending July 18 dropped approximately 500 bbls. during the last seven days. July 18 they had averaged 104,790 bbls., a 50 bbl. decrease from the week before, but this week they slumped to 104,300 bbls. Arkansas, through a decline of 25 bbls. in Champagnolle runs, accounted for all but 55 bbls. of this week's losses, though practically every pool in the division except Elm Grove, Pleasant Hill, Sarepta-Cartersville, Stephens and Bradley, contributed to the decline. DeSoto-Red River and Caddo light, though practically stationary, and Urania were the only districts showing any improvement. Arkansas runs totaled 68,215 bbls. and north Louisiana 36,085 bbls., declines of 435 and 55 bbls., respectively. Daily average runs from the several pools were:

Louisiana	
Caddo, light	9,450
Caddo, heavy	3,385
Homer	3,870
Haynesville	4,890
DeSoto-Red River	3,685
Elm Grove	545
Bellevue	585
Cotton Valley	2,510
Urania	6,390
Pleasant Hill	525
Sarepta-Cartersville	250
Total	36,085

Arkansas	
ElDorado	4,615
Smackover, light	6,100
Smackover, heavy	46,925
Stephens	1,010
Nevada County	1,000
Lisbon	1,215
Champagnolle	7,260
Bradley	90
Total	68,215
Both states	104,300
Last week	104,790
Decrease	490

(Continued on Page 111)

GAS SHOWING IN MISSISSIPPI; MADISON COUNTY, ARK., GETS WELL

By D. H. Bancroft

SHREVEPORT, La., July 27.—A gas show below 3,500 feet in Arkansas Natural Gas Corp.'s Monroe County, Mississippi, well and a small gasser of commercial proportions in Madison County, Arkansas, a small pumper in the White Sulphur district of LaSalle Parish, Louisiana, and a dry hole on the north fringe of the Richland Parish gas field sum up the items standing out in this week's wildcat developments in this division.

The north Arkansas well is Independent Oil & Gas Co.'s No. 1 Banks & Teague in Section 6-16-27, Madison County, approximately 60 miles northwest of the Clarksville, Johnson County, Field, and was estimated to make 3,500,000 feet of dry gas after a shot at 460 feet in a shallow sand that showed gas but was passed up in drilling. A string of 6⅝-inch casing was set at 2,425 feet and the hole drilled to around 2,500 feet where it ran into red granite. Then they cemented back to 460 feet and shot formation with the above results. The company has a considerable block around the well and is adding more acreage on the west side in the SE cor. of Township 17-29, Washington County. On the strength of this shallow well, which is similar to a series of such drilled 10 or 15 years ago a few miles northwest of Fayetteville which supplied farmers living in the vicinity for some time, the company is understood to be planning a series of shallow wells and also another deep test.

Lincoln Lease Holding Syndicate's No. 1 Lincoln Townsite in Section 30-15-22, Washington County, a few miles southwest of Fayetteville, is shut down at 1,040 feet for repairs to the rig with 10-inch surface pipe set at 460 feet. C. H. Willoughby's No. 1 Jones, which had a small amount of gas at around 560 feet, is still shut down at 1,342 feet with 6⅝-inch cemented at 1,320 feet. Phillips Petroleum Co. is still doing this work on its block in Madison County and Chase and others of Tulsa have assembled a block in Township 15, Range 32, Washington County, northwest of the town of Prairie Grove and are moving in rig to drill, but check location has not come through. This locality is sharing in the increasing interest taken in northwest Arkansas and the Arkansas River Valley in general and Sinclair Oil Co. had two scouts and land men at Fayetteville last week checking leases.

Clarksville Lime

C. O. Moore has completed the survey for a 10-inch line he is building from the Clarksville Field to Fayetteville and other towns north of it on the Frisco Railroad, and plans to award contract for construction about the middle of August. Arkansas Natural Gas Corp. will supply him his gas but if further development in the near future should produce more of the shallow gas found by the Independent and in the old drilling around Fayetteville he will draw on that source. Meanwhile his line will be some encouragement to further drilling for both shallow and deep production. Letona Syndicate is running 6⅝-inch casing on No. 1 Letona Townsite, Section 35-9-8, White County, to test the sand that developed about 500,000 feet of gas at 2,970-75 feet early in June.

The show in the Arkansas Natural Gas Corp.'s No. 1 Rye, Section 22-15-17, Monroe County, Mississippi, amounted to about 82,000 feet with the bottom at 3,539 feet, 2 feet in sand, and was the fourth the well has made, the others being at 2,432-47 feet in sand and slate, 2,692-2,715 feet in sand and 3,375-76 feet in the top of the sand.

Tunica Petroleum Co. completed No. 47 L. & A. in Section 17-7-2e, LaSalle Parish, pumping 10 bbls. of oil testing around 21 gravity and having the same characteristics as Grade A Coastal crude. Total depth is 818 feet with the bottom

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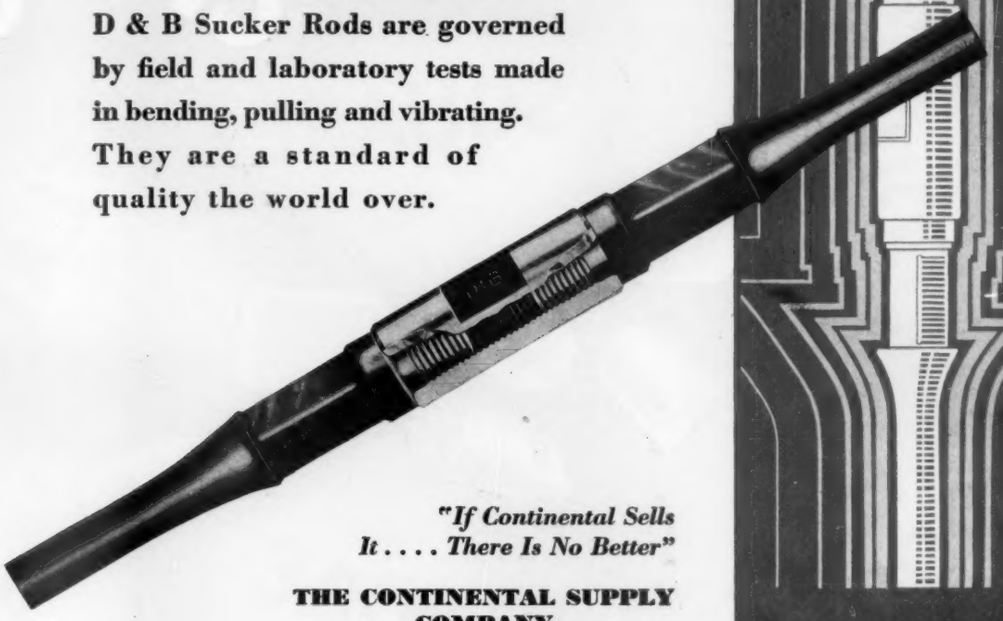

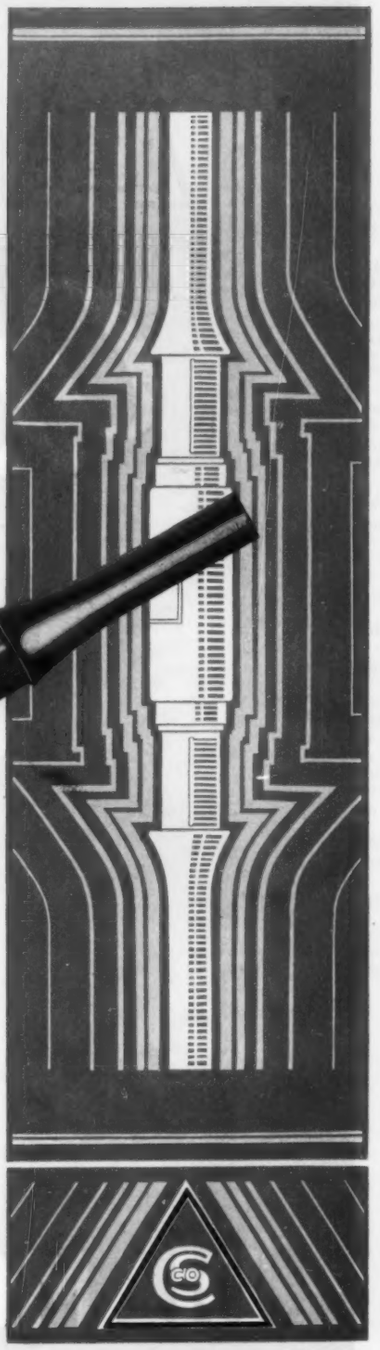

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May Link Barbers Hill Deep Pools

Largest Deep Sand Producer May Start Third Drilling Boom in That District Since Last October

By Neil Williams
Staff Correspondent, Gulf Coast Fields

HOUSTON, Tex., July 29.—Indications that the two deep sand pools at Barbers Hill, one on the east and one on the south, will be linked by prolific production was given late Saturday by the completion of a gusher by Republic Production Co. on the extreme southeast side of the dome. The well, No. 1 McKinney, in the William Hodge Survey, is a quarter mile from production but in line with production of the two deep pools.

Flowing initially at an estimated rate of 5,900 bbls. of pipe line oil daily, the well is the largest of the deep sand producers yet brought in at Barbers Hill. Its production is from a sand at a total depth of 5,202 feet and the oil is 27.2 gravity.

Completion of this semi-wildcat gusher promises the start of the third deep drilling boom at Barbers Hill since last October when Mills Bennett Production Co.'s No. 1 Smith, on the east side, opened deep sands for production. Yount Lee Oil Co. already is rigging up for an offset, No. 1 Woodward, and Republic Production Co. is reported to have made three new locations in that vicinity.

This was the second good well at Barbers Hill during the week. Mills Bennett Production Co.'s No. 2 Hamman-Armstrong, in the H. Griffith Survey on the east side, was completed as a 3,400 bbl. well Thursday from sand at 5,143 feet. The two wells have added 9,300 bbls. of flush production to the field. This new production follows a week in which the daily average production of coastal fields declined due to the failure of fields to add any importnnt new poduction in the previous two weeks.

Lake Pelto Dome

The Lake Pelto Dome, one of the seven wildcat domes being developed by The Texas Company and the Louisiana Land & Exploration Co. in southern Terrebonne Parish, Louisiana, was definitely opened as an oil field late Saturday when The Texas Company's No. 1-B Lake Pelto was swabbed in making 412 bbls. of pipe line oil in the first 12 hours. After swabbing 12 hours the well was put on two chokes, a half and a five-eighths-inch, and flowed steadily at the rate of 17 bbls. hourly or at the rate of 408 bbls. daily. The oil is 17 gravity corrected for temperature.

Production in this wildcat is from a sand at a total depth of only 1,388 feet with 140 feet of screen in the hole. The well originally was completed early in July at a depth of 1,268 feet blowing 3,000,000 feet of gas. This was killed and the hole deepened to 1,288 feet at which level the well sprayed at the rate of 2½ bbls. of oil hourly for a time and was killed and deepened to its present depth and screen taking in all the sand set.

Terrebonne Parish Tests

Proving by The Texas Company of two more of its geophysical prospects in Terrebonne Parish as salt domes was another important development in coastal operations during the week. This company drilled into salt on its No. 1 Louisiana Land & Exploration Co., the first test on the Four Isle Dome, and also topped the anhydrite cap rock in its No. 1 Timbalier Bay, the first test on the Caillou Island Dome. The former was shallow, finding the salt at approximately 1,300 feet while the latter Saturday was still drilling anhydrite at 2,964 feet.

The success met by The Texas Company in drilling on these seven domes in Terrebonne Parish taken over last year from the Louisiana Land & Exploration Co. is unusual. In rapid succession in less than six months of development three prospects have been proved definitely as domes by first tests; on two others oil has been found; on a sixth a 96,000,000-foot gas well has been completed, and on the seventh a first test has not been drilled.

This company's No. 1-A Dog Lake, the first producer in Terrebonne Parish, was put on the pump Thursday night. Although the first day it made only water, Saturday it was pumping 50 bbls. of oil. This is a shallow well.

Rich Sand on Sealy Dome

Finding of a rich oil sand in the second test drilled on the Sealy Dome of Austin and Waller Counties again centered considerable interest of Gulf Coast operators on that area. This test, Kirby Petroleum Co.'s No. 1 Vaughn, Monday was setting screen to test a sand at a total depth of approximately 2,955 feet, and indications pointed to the opening of a new field, possibly in this test.

The Sealy Dome, also known as Brookshire or San Felipe, has been one of the most interesting and favorable prospects for oil production of the many geophysical domes discovered on the coast, especially since showings encountered in the first test drilled by the Gulf Production Co. the latter part of 1928. Although this test tested sulphur water in the cap rock, the showings were of enough importance to foretell the existence of a field.

The Vaughn test is just across the river from the Gulf's test, but although this close, is in a sand on top of the dome rather than in the cap, and there is much optimism regarding its outcome. The acreage formerly was all held by the Gulf Production Co., which discovered the dome by seismograph, but since the drilling of the first test proving the dome, the company has "farmed" out its holdings, the east half being taken by Kirby Petroleum Co. and Rich Oil Syndicate, and the west half mostly by Empire Gas & Fuel Co. The acreage on the dome is cut in two by the Brazos river, which divides Austin and Waller Counties. Rights to the river are held by the Dixie Oil Co., which several months ago started a test but quit it after drilling to 500 feet.

In addition to the wells at Barbers Hill, good completions of the week included a 2,000 bbl. producer on the east side of Pierce Junction, and a 1,000 bbl. well at Sulphur Dome, Calcasieu Parish, Louisiana. The former, Gulf Production Co.'s No. 8 Cain, deepened from a sand at 4,655 feet to one at 4,974 feet, came in early in the week, as one of two wells at that dome, the other being Pure Oil Co.'s No. 1 Herman Estate on the southwest side, flowing in the first 24 hours 313 bbls. of fluid, 1 3-10 per cent b.s. and water, with 94 feet of screen set at 4,992 feet. Union Sulphur Co.'s No. 747 Fee, Sulphur Dome, was brought in early in the week flowing 1,000 bbls. daily at 2,797 feet.

Humble Oil & Refining Co.'s No. 3 Dietrichs, Raccoon Bend, flowed 371 bbls. of oil, choked in, the first day from sand at 3,500 feet. Saxet Oil Co.'s No. 8 Claude Heard, at Refugio, swabbed 350 bbls., 4 per cent water, from sand at 3,690-93 feet, and Sun Oil Co. added another producer at Clary Creek, Washington County, in its No. 7 G. F. Grote, flowing 300 bbls. daily at 1,265 feet, but with these exceptions completions were of little interest.

Among the remaining completions were Rio Bravo Oil Co.'s No. 37-C at Saratoga, flowing 8 bbls. of pipe line oil from the shallow sand at 932 feet; Sun Oil Co.'s No. 10 Carr, Hull, pumping 40 bbls. at 457 feet; Daisetta Oil Co.'s No. 1 Wilson, Hull, pumping 3 bbls. at 2,043 feet; Navarro Oil Co.'s No. 3 Hausler, Big Creek, pumping 20 bbls., 2,566 feet; Yount Lee Oil Co.'s No. 5 Gladys City, a workover, Spindletop, flowing 700 bbls, 2,934 feet; Lee & Scott's No. 2 Scott, Goose Creek, pumping 125 bbls. oil, 1,212 feet; Vinton Petroleum Co.'s No. 2 Matilda Gray, a workover, Vinton, flowing 2,400 bbls. of fluid, 50 per cent oil, 3,035 feet; Ratcliff Oil Co.'s No. 2 Crusel, Jennings, Pumping 25 bbls. of oil, 1,551 feet; Republic Production Co.'s No. 61 Dolnear, Hull, pumping 175 bbls. fluid, 80 per cent oil; Houston Oil Co.'s No. 1-F Rooke, Refugio, blowing dry gas, 1,450 pounds pressure, 3,685 feet.

In a couple dozen tests drilled at DeWalt, Fort Bend County, by Humble Oil & Refining Co., the second to find the salt was abandoned the past week. This was No. 1-B Deatherage, which was quit in salt at 4,471 feet, marking the first abandonment in over a year of drilling at this dome. No. 1 Deatherage, which also found the salt the latter part of last year, and which was plugged back to an oil sand, never has been completed as a commercial producer but neither has it been abandoned.

Disappointment at Lost Lake

Disappointment was experienced in Pure Oil Co.'s No. 3 Mayes, Lost Lake Dome, northern Chambers County, which tested salt water in a sand at a total depth of 2,152 feet. This test is 400 feet east of No. 1 Mayes, which made a 40,000,000-foot gasser, the first and only well on the dome.

The chief interest in coastal development the past week continued to be focused on the intensive geophysical exploration principally with the torsion balance, which is going on in virtually every section of the Gulf Coast. There is no part of the coastal area which is not now in the play and numerous rumors of acreage blocking around reported dome prospect discoveries are heard at all times although much of this leasing sifts out to be protection buying rather than definite dome discoveries.

The sharp drop in daily average production of coastal fields for the week brought the total daily production down to 147,416 bbls., the lowest it has been for some time. Figures by fields for the week ending July 27 are:

GULF COAST PRODUCTION

Texas

Allen	8
Barbers Hill	7,170
Batson	1,316
Big Creek	3,610
Blue Ridge	3,835
Brenham	300
Boling	1,459
Clay Creek	2,510
Damon Mound	670
DeWalt	13,524
Goose Creek	5,656
High Island	1,977
Hull	8,337
Humble	5,687
Jasper	35
Markham	385
Nash	485
North Dayton	375
Orange	2,758
Orchard	115
Pierce Junction	14,211
Port Neches	535
Refugio	4,014
Raccoon Bend	7,395
Saratoga	939
Sour Lake	2,708
So. Liberty-So. Dayton	5,598
Spindletop	27,472
West Columbia	6,318
Total Texas Coast	129,392
Week ending July 20	133,781
Decrease	4,389

South Louisiana

Anse La Butte	50
Bayou Bouillon	135
Black Bayou	101
Dog Lake	18
Edgerly	715
Jennings	2,501
Hackberry	4,602
Lockport	3,336
Sorrento	97
Starks	426
Sulphur	1,659
Sweet Lake	40
Vinton	4,317
Welsh	35
Total Louisiana Coast	18,024
Week ending July 20	18,900
Decrease	876
Total Gulf Coast	147,416
Week ending July 20	152,681
Decrease	5,265

GULF COAST FIELDS AND WILDCATS

Week Ended July 27

BARBERS HILL—CHAMBERS COUNTY

Mills Bennett Production Co.'s No. 3 Smith, east flank	Drlg. shale 5,381 ft.
Mills Bennett Production Co.'s No. 2 Hamman	Comp. flowing 3,400 bbls. pipe line oil 5,143 ft.; gravity 27.7 degrees.
Humphreys Corp.'s No. 8-A Kirby, east flank	Drlg. shale 5,052 ft.
Humphreys Corp.'s No. 1-H Kirby, east flank	Fishing drill pipe 4,868 ft.
Humphreys Corp.'s No. 2-H Kirby, east side	Drlg. lime 4,292 ft.
Humphreys Corp.'s No. 3-H Kirby, east side	Drlg. gumbo 3,681 ft.
Humphrey's Corp.'s No. 1 Tarbutton, east flank	Drlg. sand rock 4,236 ft.
Humphreys Corp.'s No. 1 Illfrey, east flank	Drlg. shale and lime 4,768 ft.
Moody Corp.'s No. 1 Illfrey	Drlg. 4,739 ft.
Republic Production Co.'s No. 1 McKinney, south flank	Drlg. plug 4,920 ft.
Rexal Oil Co.'s No. 2 McLean, east flank	Drlg. sand and shale showing oil 5,234 ft.
Rexal Oil Co.'s No. 3 McLean, east flank	Drlg. shale and boulders 1,898 ft.
Rexal Oil Co.'s No. 1 Smith, east flank	Drlg. sand and lime 5,060 ft.
Rexal Oil Co.'s No. 1 Cockburn, east flank	Drlg. hard sand 4,564 ft.
Sun Oil Co.'s No. 3 Chambers, south flank	Drlg. shale and lime 2,293 ft.
Yount Lee Oil Co.'s No. 4 Chambers, southwest	Drlg. water sand 7,323 ft.
Yount Lee Oil Co.'s No. 7 Chambers, south	Drlg. hard lime 4,711 ft.
Yount Lee Oil Co.'s No. 1 Kirby, south side	Drlg. shale and lime 4,472 ft.
Yount Lee Oil Co.'s No. 1 Woodward	Derrick.

BOLING—FORT BEND AND WHARTON

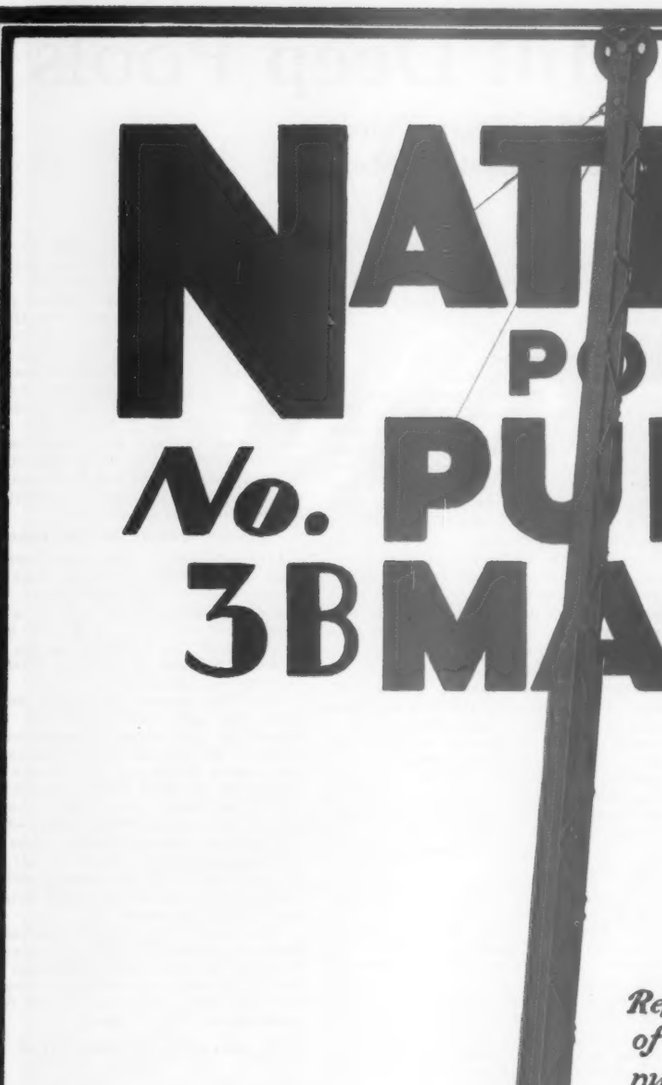
Sun Oil Co.'s No. 8 E. C. Farmer	Rig.
The Texas Company's No. 1 Bushnell, northeast	Rigging up to pump 4,224 ft.
The Texas Company's No. 2 Pleasants, northwest	Drlg. sand, shale and lime 3,401 ft.
Vacuum Oil Co.'s No. 3 Taylor, south side	Cemented 9⅝-inch casing to test oil sand at 3,926 ft.
Union Sulphur Co.'s No. 5 Hill	Drlg. 812 ft.

RACCOON BEND—AUSTIN COUNTY

Humble & Valley's No. 5 Hardy	Drlg. hard sandy lime 1,079 ft.
Humble & Valley's No. 2 Buchanan	Drlg. sandy shale 1,978 ft.
Humble Oil & Refg. Co.'s No. 2-B Mitchell	Derrick.
Humble & Valley's No. 2 Stravoski	Drlg. hard sandy shale 3,873 ft.
Humble & Valley's No. 3 Walton	Reaming 2,884 ft.
Humble & Valley's No. 1-B Walton	Waiting cement to set 1,202 ft.

(Continued on Page 110)

NATIONAL PORTABLE No. 3B PUMPING MACHINE



Replaces the drilling rig upon completion of drilling operations, and provides for pumping, pulling rods, tubing, casing and cleaning out or deepening the hole.

DESCRIPTIVE BULLETIN NO. 54 ON REQUEST

THE NATIONAL SUPPLY COMPANIES

Activity Renewed in Big Horn Basin

Markets for Crude Offered by Refineries at Cody and Billings. Continental Well in New Mexico Shows Oil, Gas

By Tolbert R. Ingram
Staff Correspondent, Rocky Mountain Area

DENVER, Colo., July 29.—As a result of the completion of refineries in Billings, Mont., and Cody, Wyo., which are to run on crude from Oregon Basin of Wyoming, many black oil completions are in prospect.

In Lea County, New Mexico, the Continental Oil Co. had a good showing of oil and gas through 1,500 feet of water in No. 1 Wells in the Jal area. The Texas Production Co.'s No. 1 Shepherd in the Rhodes area is producing 1,360 bbls. under a back pressure of 350 pounds.

Little of interest has been reported from Colorado fields the last week. The Five Square Oil Co. is preparing to make a test of its discovery, No. 24 S. D. Parkinson on Iles Dome, Moffat County, which was a failure in the Sundance. It is being plugged back for a test of the Morrison.

WYOMING

Activity in the northern part of the Big Horn Basin in Park and Big Horn Counties, Wyoming, early last year was brought about by deep sand discoveries on Byron and Frannie Domes, and the renewed drilling results from markets being established for this grade of crude by the completion of The Texas Company's refinery in Cody, Wyo., and the Yale Oil Corp.'s refinery in Billings, Mont. From present indications there will be many completions in the basin before the close of the present drilling season.

Producers & Refiners Corp.'s No. 1 Owen permit, SE cor., Section 29-52n-100w, spudded December, 1928, was drilling at 1,630 feet. Prairie Oil & Gas Co.'s Contract 905, well No. 1, SW cor., Section 33-52n-100w, set 12½-inch casing at 1,453 feet; drilling at 1,453 feet. Big Horn Petroleum Co.'s well No. 1, Tract 82, SW SE, Section 7-51n-100w, shut down at 3,943 feet in Tensleep sand, is waiting for cement to set before drilling past bit. This company's No. 1 Hoodoo, NE NE, Section 36-51n-100w, was shut down at 4,340 feet at top of Tensleep.

Lenco Petroleum Co.'s No. 1 Lyle, SW SW, Section 24-51n-101w, was abandoned at 4,502 feet in Tensleep. This company's No. 1 Pulley, SE SE, Section 13-51n-101w, was abandoned at 1,010 feet and is pulling casing, and its No. 1 Robinson, NE NE, Section 1-50n-101w, is shut down at 1,120 feet in the top of the Frontier.

Orchard Oil Co.'s No. 5 Rue, Permit No. 3, SW NW SW, Section 28-51n-100w, was completed in the Tensleep sand July 16, with an estimated production of 500 to 600 bbls. The total depth is 3,931 feet. This company's No. 7 Rue, SW SW NW, Section 28-51n-100w, is rigging up.

Cody Petroleum Co. Locations

The Cody Petroleum Co.'s deep test on the south end of Oregon Basin, NE, Section 27-51n-101w, was drilling in red beds at 3,775 feet. The following new locations have been released by the Cody Petroleum Co.: No. 7 Klindt, CNL NE NE, Section 7-51n-101; No. 8 Klindt, NW NE NE, Section 7-51n-100w; No. 10 Klindt, NE SW, Section 6-51n-100w; and No. 11 Klindt, SE NE SW, Section 6-51n-100w.

Midwest Refining Co.'s No. 36 Rosenburg, NW, Section 25-58n-98w, on the Frannie structure in Park County, was drilling in white limestone at 2,887 feet. This concern's No. 1 Rosenburg, NW, Section 26-58n-98w, was in blue shale at 710 feet. Cody Petroleum Co.'s No. 1, NE cor., Section 12-51n-98w, is rigging up, and its No. 1 on the Pole Cat structure in Park County, SW cor., Section 22-57n-98w, is spudding.

Producers & Refiners Corp.'s test of the Sage Creek structure, NE SE, Section 7-57n-97w, was a disappointment in the Embar sand and has been abandoned at 2,800 feet. Its test on the NW NE SE of the same section has been shut down at 620 feet. This company's No. 3 well on the Garland structure in Park County, SW NW NE, Section 24-56n-98w, has reached a depth of 3,700 feet. The Ohio Oil Co. was drilling at 2,400 feet in its test in the C W half NE, Lot 57, Township 56n, Range 97w, on the Garland structure. It has a completion at 3,430 feet in the SW SE, Tract 2, Section 33-56n-97e, estimated to be flowing 37,000,000 feet of sulphur gas.

Cody Petroleum Co.'s No. 1 well, near Cowley, in Big Horn County, C NW SW, Section 27-57n-96w, is running 10-inch casing at 1,825 feet.

The California Co. has a disappointment in its No. 1 Wyss, on the South Cottonwood structure in Sublette County, at a location in the NW SE NE SW, Section 12-32n-115w. The well is being abandoned at 2,430 feet, at which depth it is bottomed in rocks of Cretaceous age. Planned as a Pennsylvanian test, this well drilled through an overthrust fault at 1,670 feet, at which depth it was found that the Ankareh of upper Triassic age was resting on Cretaceous rocks. The Twin Creek is on the surface and this formation was 1,080 feet thick. The Nuggett was drilled from 1,080 to 1,510 feet, Ankareh from 1,510 to 1,670 feet, and, as stated, Cretaceous rocks were found from 1,670 feet to the abandonment depth of 2,434 feet.

COLORADO

The Trinidad Development Co. has let a contract for a 1,500-foot test to be started August 1, in the SE cor. SW, Section 23-32s-63w, on the Victor Flonez farm. The test is being made in the expectation of obtaining a natural gas supply for the town of Trinidad. Such structure as is in evidence here is developed in Pierre shale, and the possible gas producing horizon is the sandy Apishapa shale.

The Kime Petroleum Co.'s test south of the Yellowbanks structure in Pueblo County, has reached a depth of 750 feet. It is located in the C E half SE, Section 32-25s-61w.

The Five Square Oil Co. has placed a watchman at its well on the Berthoud structure, SW cor., Section 16-4n-69w, and is not allowing visitors in the rig. The management reports that the well will be tested as soon as swab repairs are received and that the results of the test will be made public. The well is standing with 2,500 feet of oil in the hole. The totl depth is 3,758 feet.

The White River Dome test of the Texas Production Co. in Rio Blanco County, Colorado, NE SE, Section 30-2n-96w, is now under way and is drilling with rotary tools below 300 feet. The well starts in the Wasatch, a Tertiary formation that has proven productive of gas on this dome and elsewhere in the Rocky Mountain region. The objectives of the present test are the sandy phases of the Mesaverde.

Tow Creek Test Standardizing

In its deep test of Tow Creek structure, originally a Sundance objective, being drilled by the Texas Production Co. on the Belle Dennis farm, SE NE, Section 7-6n-86w, has reached a depth of 5,307 feet and is believed to be below the objective horizon. The well was drilled with rotary tools to its present depth and is now standardizing.

The Chimney Creek test of the Midwest Refining Co., at No. 10 location, on the NW, Section 4-7n-86w, was drilling at 735 feet in dark shale. This test is being watched closely on account of its location with reference to the production now being developed by the Texas Production Co. on Tow Creek.

Midwest Refining Co.'s No. 24 SD Parkinson, on the NW, Section 22-4n-92w, Iles Dome, Moffat County, which was drilled to the Sundance at 3,560-70 feet, is a failure in that sand, and has been plugged to the Morrison at 3,492 feet. The 6¼-inch has been cemented at 3,348 feet, and the operators are now preparing to test the Morrison.

The Kinney Coastal-Parker Club test of Badito Alamo structure in Huerfano County, No. 1 fee, CNL NW SE, Section 4-28s-68w, which has been standing at 3,025 feet with 8¼-inch casing set at 1,270 feet, for several months, is to be started up again immediately under an agreement reached recently by the operators.

NEW MEXICO

Prairie Oil & Gas Co.'s No. 1 Keel, SW cor., Section 7-17s-31e, which had a fair showing of oil in lime at 2,885 feet, was drilling below 2,975 feet. The Pueblo Oil Co.'s No. 1 Lee, SW cor., Section 34-17s-29e, had a show of oil at 2,541 feet and is shut down preparing to test the show. Its No. 4 Russell, NW cor., Section 18-17s-30e, is drilling below 2,765 feet. No. 1 Hagerty of Levers and others, NE NE NW, Section 18-16s-30e, was drilling in lime at 3,600 feet. This well has had shows of oil at 2,700, 3,135, 3,267 and 3,305 feet. Flynn, Welch & Yates are drilling at 3,135 feet in No. 1 Gissler, SE SE SW, Section 12-17s-30e. This well had an important showing of oil with a little gas at 2,950 feet.

There have been no important developments in the Twin Hills area the past week. Midwest Refining Co.'s No. 31 Lane, SW Section 28-19s-30e, was drilling in lime at 1,920 feet. Midwest Refining Co.'s No. 31 Jones, SW Section 26-19s-31e, is shut down at 502 feet. Levers and others' No. 1 State, NW cor., Section 19-20s-30e, was drilling at 1,175 feet. Continental Oil Co.'s (Marland) No. 1 Cunningham, NE Section 8-20s-30e, was drilling at 910 feet.

The Mesa Oil Co.'s No. 1 Seale, NW cor., Section 15-20s-27e, is under way, and at last reports was drilling below 550 feet. Compton's No. 1, on the Stewart permit, NE cor., Section 28-20s-27e, was spudding at 315 feet. Cranfill & Reynolds' No. 1 Meyer, NE NE SE, Section 22-24s-36e, was drilling ahead at 3,515 feet after developing an estimated 50,000,000 feet of gas at 3,435-38 feet. This well had a showing for 2,000,000 feet of gas at 3,368-80 feet and a spray of oil which is not showing at present, probably owing to the high pressure of gas.

Humble Killing Gas Flow

Humble Oil & Refining Co. is killing an estimated 10,000,000 feet of gas at 3,278-82 feet, the present total depth, in No. 1 Lindley, C NE NE, Section 23-25s-36e. This well had an unimportant show of oil at 3,260-71 feet.

Magnolia Petroleum Co. is spudding at 460 feet in light shale in No. 1 Lindley, SE cor. NE, Section 26-25s-36e. Midwest Refining Co.'s No. 22 Gregory on SW Section 31-25s-37e, is mudding off 70,000,000 feet of gas at 3,072 feet.

(Continued on Page 138)

STRING OF TESTS DRILLING IN LIME AT TURNER VALLEY

By Victor Lauriston
Staff Correspondent, Canadian Fields

CHATHAM, Ontario, July 27.—In the Turner Valley Field, Imperial Oil, Ltd., has a string of tests drilling in the lime, and the coming six weeks should see several brought into production. Included are two tests in the south end. North West-Associated's No. 1, LSD 6, Section 20-19-2w5, in the same section as the Home producers, is practically in production at 5,410 feet, but with the bit stuck in the hole, about 232 feet in the lime. The drillers are running acid in an effort to loosen the bit. Several strong gas flows were met, potential production at the present depth being unofficially estimated at 9,000,000 feet, though owing to the mud used to overcome heavy gas pressure it is impossible to measure the flow.

In the Central Field, Foothills Oil & Gas Co.'s No. 2, LSD 8, Section 1-20-3w5, is drilling 252 feet in the lime at 4,609 feet depth, with slightly increased gas flow. Total flow is probably around 5,000,000 feet.

Imperial Operations

Imperial operations are exceedingly active in the south end, where acreage is being tested for a number of lease-holding companies. Home Oil Co.'s No. 5, LSD 7, Section 20-19-2w5, is rigging up. It is reported that Home's No. 1, LSD 10, same section, is showing some further increase in production. Home's No. 2, LSD 14, same section, which was temporarily frozen off, is back into complete production.

Of the string of tests drilled by Imperial Oil, Ltd., on acreage of other companies, the most advanced is Mayland Oil Co.'s No. 1, LSD 10, Section 17-19-2w5. This test is installing rotary outfit to resume drilling at 5,404 feet. Some weeks ago this test got a good show of light crude, apparently in the Dalhousie sand. At this stage arrangements were made to complete the test to the deep lime horizon. Mayland's No. 1 is a mile south and slightly east of Home's No. 1, and the most southerly test that has got near the top of the lime. Lowery Petroleums' No. 1, NW, Section 17-19-2w5, is preparing to spud in. Hargal Oils' No. 1, Section 20-19-2w5, offsetting the Home wells, is reported working on derrick, for a rotary test.

Directors of Royalite Oil Co. have decided to increase the capital from 400,000 to 500,000 no par shares. Existing shareholders have the right to subscribe for one new share for every four shares now held, at a price of $30. A. M. McQueen, vice president of Imperial Oil, Ltd., states his company will take its full allotment of new stock. Capital realized will be used to repay the Imperial loan to Royalite, and will leave a surplus of more than $500,000 in the Royalite treasury. The proposal will be submitted to a shareholders meeting on August 30.

In the south end Merland Oils' No. 1, Section 27-18-2w5, is drilling below 1,200

(Continued on Page 114)

Santa Fe Springs Now at Critical Stage

Peak of 295,000 Bbls. May Be Exceeded Within a Month if Sufficient Number of New Wells Completed

By L. P. Stockman
Staff Correspondent, California Fields

LOS ANGELES, Calif., July 27.—Santa Fe Springs reached the critical stage this week and developments during the next 15 days should definitely determine its future status from a production standpoint. On the basis of operations during the past 10 days, it would be logical to assume that the peak was established last week when the output averaged 295,000 bbls. per day, but on the other hand, there are 67 wells rotating ahead below the 6,000-foot level, a large number of which are scheduled for early completion. At any rate, we cannot anticipate any immediate substantial decline in field production due to the large amount of work still under way. The upper part of the O'Connell zone has already shown evidence of depletion in several spots, but the lower O'Connell and upper part of the Clarke, which are being produced simultaneously, will still yield substantial production for several months to come. Daily production will probably show several violent fluctuations during the next 30 days and may even exceed the high established last week if a sufficient number of new wells are completed within a short period of time.

Daily production at Santa Fe Springs showed a substantial decline during the past week due primarily to a smaller number of completions. Only two wells were put on production in this field during the past seven-day period, but a check indicates the probability that future completion lists will be considerably larger. Another wave of completions is expected early in August and quite a large number of new wells should be finished before the new gas law becomes effective. There are 216 wells headed down for the deep zone in the Santa Fe Springs Field at the present time, a large number of which have already passed the 5,500-foot level. The substantial decline in production at Santa Fe Springs last week is due to an abnormal condition resulting from a scarcity of completions and it is therefore quite obvious that this condition will not continue indefinitely. The next group of completions will probably swing production curves up again as the present sensitive condition of production is bound to reflect the initial output and rate at which these new wells will be finished.

The exact time at which the 1929 peak is reached at Santa Fe Springs is only of minor consideration. What the industry is interested in primarily is the rate of decline following attainment of the high point. Attention has already been directed to the fact that no immediate substantial decline can be anticipated in the daily production of this field. Production curves will fluctuate up and down, reflecting the completion of new wells from time to time during the next five or six weeks and it is not at all improbable that field production may again approach the current high of 295,000 bbls. per day established for the week ending July 22, as the large number of wells scheduled for completion in the deep zone during August is bound to affect production to a substantial extent. The two wells finished at Santa Fe Springs during the current week were the Bandini Petroleum Co.'s No. 16 and No. 14 Golay of the Shell Oil Co. The former came in flowing 5,150 bbls. of 35.1 gravity oil daily while the latter tanked 5,060 bbls. daily from 6,864 feet.

Tideland development in the prolific Elwood Field of Santa Barbara County is going ahead quite rapidly and the first well will probably be spudded in some time within the next 30 days. The Pacific Western Oil Co. has already started rig construction for its first tideland project located on permit No. 92 and this work will be pushed ahead as quickly as possible. The Bankline Oil Co.'s initial tideland project is expected to be spudded in around the end of August, at which time the Barnsdall and Rio Grande will probably also spud in the necessary offset. The Honolulu Consolidated is also stepping right along with tideland development but will probably not be in a position to start drilling operations until some time early in September. The tideland permit of the Bankline and Honolulu Consolidated adjoins the Bell Luton lease and the Barnsdall and Rio Grande will therefore find it necessary to undertake offset development as these holdings are located in proven territory and assured of commercial production.

The Barnsdall is expected to finish No. 5 Doty, a new well in this field, within the next day or two and usual substantial production can be expected.

TANKER SHIPMENTS FROM LOS ANGELES TO ATLANTIC AND GULF COAST PORTS

Commodity—	Total this week	Daily average	Total last week	Daily average	This year to date	Same time last year
Crude oil	77,912	11,130	78,275	11,182	722,232	2,565,422
Fuel oil	.....	.....	.....	.....	49,950	111,621
Diesel and gas oil	.....	.....	.....	.....	913,200	1,234,927
Gasoline	295,276	42,182	597,619	85,374	11,661,112	7,615,003
Naphtha distillate	.....	.....	.....	.....	81,750	171,250
Coastwise—						
Crude oil	315,776	45,111	821,827	117,404	13,586,298	13,495,034
Fuel oil	276,852	39,550	299,796	42,828	12,071,298	9,722,796
Diesel and gas oil	23,864	3,409	23,255	3,323	739,459	699,640
Gasoline	349,064	49,866	316,948	45,278	6,241,709	4,546,507
Kerosene	.....	.....	.....	.....	38,157	52,884
Naphtha distillate	.....	.....	.....	.....	.....	171,566
Exports—						
Crude oil	237,764	33,966	128,994	19,856	3,176,408	1,316,385
Fuel oil	237,230	33,890	505,356	72,194	10,890,520	14,106,241
Diesel and gas oil	.....	.....	1,550	221	1,465,159	1,597,092
Gasoline	151,035	21,576	265,699	37,957	6,074,121	3,540,530
Kerosene	143,898	20,557	.....	.....	1,773,006	2,487,485

TANKER SHIPMENTS FROM SAN FRANCISCO TO ATLANTIC, GULF COAST PORTS

Diesel and gas oil	.....	.....	.....	.....	.....	342,425
Gasoline	75,565	10,795	.....	.....	1,264,942	1,357,567
Lubricants	.....	.....	.....	.....	69,172	208,024
Coastwise—						
Fuel oil	.....	.....	179,831	25,690	1,602,343	2,392,680
Diesel and gas oil	.....	.....	8,775	1,254	326,235	165,048
Gasoline	126,177	18,025	100,711	14,387	2,886,352	2,663,653
Kerosene	.....	.....	10,093	1,442	85,406	158,798
Exports—						
Crude oil	.....	.....	.....	.....	121,603	85,935
Fuel oil	68,730	9,819	.....	.....	464,461	1,566,766
Diesel and gas oil	.....	.....	.....	.....	155,474	10,400
Gasoline	72,740	10,391	94,580	13,511	3,172,819	2,587,398
Kerosene	.....	.....	.....	.....	382,417	362,852
Lubricants	.....	.....	.....	.....	21,899	11,400

The Barnsdall and Rio Grande are completing preparations to pinch back their combined field production approximately 30 per cent in the very near future in order to eliminate waste of natural gas in conformity with the recently enacted gas conservation law. R. A. Broomfield, president of the Barnsdall Oil Co. of California, is assuming the initiative and contemplates reducing field production down to approximately 20,000 bbls. a day before the new gas law becomes effective on September 1. Production has been averaging around 28,000 bbls. a day for the past several weeks but is expected to be increased shortly due to the projected completion of No. 5 Doty, a new well which should be finished within the next day or so. The Barnsdall and Rio Grande are rushing construction work ahead on a new road along the ocean front and the six wharves projecting out into the open ocean from this road are scheduled for early completion. Litigation instituted by Warren E. Deuel and C. K. Cole against the Barnsdall and Rio Grande was decided in favor of the defendants by Superior Judge Leon Yankwich early in the week when he decided the plaintiffs, Deuel and Cole, were not entitled to either a rescission of a lease agreement or any additional financial remuneration in the form of damages.

Kettleman Hills

The Standard Oil Co. focused the attention of operators on the Kettleman Hills Field of Kings County when No. 81 in Section 11-22-17 was put on a preliminary production test during the early part of the past week. This well, which is a south line offset to the Milham Exploration Co.'s discovery in Section 2-22-17, came in flowing 490 bbls. of 60.2 gravity oil and 15,000,000 feet of natural gas daily from 6,673 feet, but subsequently built up and was at last reports making 970 bbls. of oil and 22,000,000 feet of natural gas. It is quite possible that the Standard will later kill this well unless larger production is subsequently developed after the well has cleaned itself out. Under the Kettleman Hills' conservation agreement this well was selected for completion in the hope that it might adversely affect gas pressure on the Milham's discovery and permit the latter to be shut in. The Milham well, incidentally, is still flowing better than 3,000 bbls. of oil and approximately 70,000,000 feet of natural gas daily.

The Marland Oil Co.'s No. 8 Elliott, another well which is scheduled to be drilled into completion in an effort to reduce gas pressure on the Milham's discovery, was rotating ahead in a hard oil sand a few days ago at 6,540 feet. This project, which is located east of the Standard's No. 81 and southeast of the Milham's discovery well, will probably be put on a production test some time during August and should result in favorable production as it is located within a few hundred feet of the Milham's discovery and the Standard's No. 81, which came in early this week. The Standard's No. 8 in Section 1-22-17, the third well scheduled for completion under the Kettleman Hills' conservation agreement and therefore permitted to drill into production in order to reduce pressure on the Milham's discovery well, is not yet deep enough to reach the pay but should pick up the oil sand within the next few weeks as drilling has just been resumed at 6,205 feet following a recement job. The Shell Oil Co. is rotating ahead in No. 1 Armstrong at 6,650 feet following a preliminary production test during the early part of July which revealed a potentiality of 300 bbls. of 60.4 gravity

MUSKEGON PRODUCING 20,000 BBLS.; WILDCATTERS BUSY IN MICHIGAN

By Special Correspondent

MUSKEGON, Mich., July 27.—With production on a more steady basis at about 20,000 bbls. a day, drilling activities are gradually being replaced in the Muskegon Field by the construction and installation of more permanent buildings and equipment, such as field offices, residences, refineries, pumping units and pipe lines. Last week there were six new completions with an aggregate initial production of 2,705 bbls.

Two Laketon Township Dundee wells were the largest new completions. Nelson & Witt, Inc.'s No. 4 Charles B. Horton, NE SE, Section 11-10-17, came in at 2,049 feet, with between 1,500 and 2,000 bbls. initial. Reed Oil Co.'s No. 7 H. Young, SE NE Section 11-10-17, made 40 bbls. an hour initial. The largest new Dundee well in Muskegon Township was the Concord Oil & Gas Co.'s No. 1 Andrew Luinstra, SW SE Section 6-10-16, which made 150 bbls. initial at 2,040-45 feet.

The Natural Gas & Oil Co.'s No. 3 Charles I. Giles will make about 50 bbls. initial in the Dundee at 2,033 feet, although it was drilled about 2 feet too deep to 2,039 feet and had to be plugged back and tubed. It lacks sufficient gas to flow.

L. E. Kennedy and others' No. 4 Charles I. Giles, NE SE, Section 6-10-16, drilled a little too deep into the upper Traverse, but finally made 55 bbls. initial from 1,670 feet.

The Continental Gas & Oil Co.'s No. 8 Continental Motors Corp. SW SE, Section 15-10-16, gauged 450,000 feet at 1,295 feet. It may go on oil soon.

The Wiser Oil Co.'s No. 1 A. H. Osgood, NE NE, Section 11-10-17, Laketon Township, may be reopened if there is any commercial production in the deeper formations.

The M. & I. Oil & Gas Co.'s No. 2 F. J. Durham, SE SW, Section 15-10-16, was reported to be good for 10 bbls. a day in the upper Traverse at about 1,690 feet, but will be carried to the lower Traverse.

The Simplex Oil Co.'s No. 1 James Dow, NW SE, Section 5-10-16, had several hundred feet of oil in the hole from the upper Traverse.

One old location in Laketon Township was abandoned and two new ones were made on the William P. Dinan fox farm lease, owned by the Rock Oil Co., of Grand Rapids. The two wells will be Nos. 2 and 3 Dinan, NE SE, Section 11-10-17. A rig is moving in for the Johnson Oil Refining Co.'s No. 14 John Thompson, SW NW, Section 12-10-17. A rig also is being moved in for the No. 5 Alfred H. Fenner for Witt & Wyant in Section 11-10-17, Laketon Township. Drillers are rigging up for Maire-Caswell-Kidder's No. 6 Mathilda Shuler, NW NW, Section 12-10-17.

One new location was made in Mus-

(Continued on Page 120)

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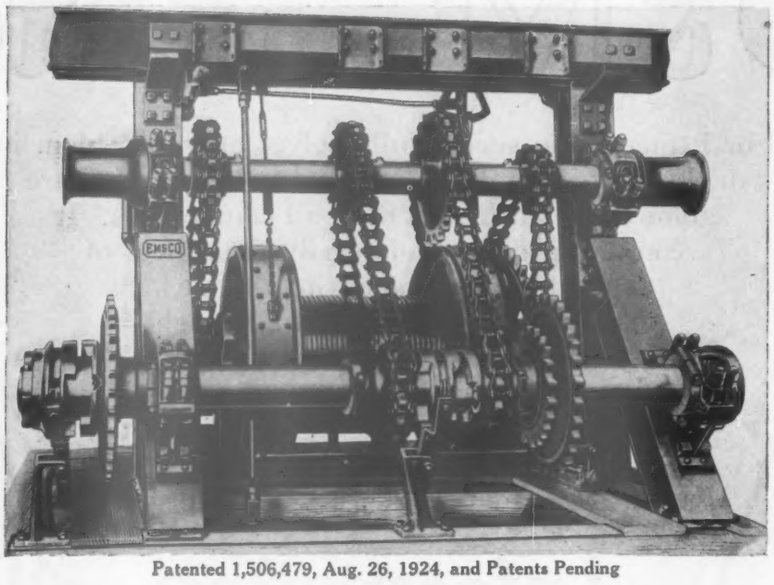

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oil and 5,000,000 feet of natural gas daily from 6,553 feet.

The operators' committee, which is faced with the necessity of formulating a definite conservation policy covering Kettleman Hills, has reached a decision and the agreement is being submitted to interested parties for signature. An engineering committee will be appointed later to determine the amount of drainage resulting from the four wells permitted to be completed and they will determine the amount of production which will be prorated among operators holding adjoining acreage. A maximum proration of 25 per cent has been set as the Standard, Marland and Milham will not agree to a distribution of an amount in excess of this figure. One of the most interesting features in connection with this conservation work is the probability that the George F. Getty Co. is obligated to drill a new well on privately owned acreage at Kettleman Hills early in October unless permission is received from the fee owner to delay operations. Getty paid a cash bonus of $80,000 for this lease and will probably find it necessary to institute development work unless an extension of time can be secured through the payment of a cash consideration. It might prove less costly for Getty to begin drilling rather than pay out any additional cash and this may be done unless other interested operators form a pool.

Midway-Sunset

The recent completion of two relatively large wells out in the Maricopa Flats area of the Midway-Sunset Field has greatly stimulated development work in the section immediately adjacent to the Signal Oil & Gas Co.'s discovery well on the Sheehan property and preparations are being made to undertake additional drilling in the immediate future. The Doyle Petroleum Co. has just increased its holdings in this section by leasing an additional 40 acres to the original 27 held in Section 8-11-23 and additional development is scheduled to get under way shortly. The Wellington Oil Co. also stepped out this week and acquired a 40-acre lease in Section 8-11-23. Lease requirements call for the drilling of two tests within the next 60 days but it is quite probable that the first hole will be spudded in early in August and two more shortly thereafter if developments warrant. The Wellington's new lease adjoins the North American's Sunset Extension property, on which a 3,000-bbl. well was recently completed. The Union is also reported to have acquired a lease in this section but no confirmation has yet been secured. The Hancock Oil Co. is starting an ambitious development campaign in this area, which is located about 3 miles southeast of the old Sunset Field, and tentative plans call for the drilling of five new wells on its holdings in Section 8-11-23 and Section 17-11-23.

The Standard Oil Co., which is rotating ahead in No. 1 Graham a little below 2,500 feet, is rigging up rotary equipment on No. 2 Graham and the latter is expected to start making hole soon. The North American Consolidated, which recently finished No. 1 Sunset Extension as a substantial producer, is rigging up No. 2 on the same property, which is located in Section 8-11-23, and spud will be made shortly. No. 2 Bronco is also scheduled to start down soon as No. 1 on the same lease in Section 8-11-23 is nearing completion. The Rio Grande Oil Co., which expects to complete No. 1 Leutholtz in the near future, is making preparations to spud in No. 1 Havenstrite in Section 17-11-23. The Doyle Petroleum Co. successfully recompleted No. 1 Weir a few days ago doing 1,460 bbls. of 23.2 gravity oil daily from 3,491 feet and rig construction has already been started for Nos. 2 and 3 on the same property. This new producer, which was spudded in subsequent to completion of the Signal Oil & Gas Co.'s No. 2 Sheehan, is flowing under a pressure of 460 pounds. The Birch Oil Co.'s No. 1 in Section 7-11-23, came in flowing 2,000 bbls. a day from 2,710 feet during the early part of the week but it was subsequently killed due to the fact that a satisfactory water shut off had not been affected. The Cypress Oil Co. has landed a string of 8⅝-inch in No. 15 Fairbanks and this well, located in the older section of the Midway-Section Field in Section 22-32-23, is scheduled for an early test. No. 1-A Perris of the Shell Oil Co. in Section 15-32-23, and No. 1 Mascot of the Standard in Section 26-32-23, however, have not yet picked up anything of importance, notwithstanding the fact that both are below 6,000 feet.

Mount Poso

Development work in the Mount Poso Field of Kern County is considerably more active since the General Petroleum resumed production activities on May 1 and preparations are being made to undertake additional drilling. The Union Oil Co. has one well under way on the Sarrett & Mack property and has two strings of tools in operation on the Tribe lease at present but is rigging up two more wells, Nos. 5 and 6, for immediate work on the former property. The Shell has two wells under way in this area and the Petroleum Securities one. The Buttram Oil Co. found the top of the Vedder zone in its No. 2 at 1,350 feet but is abandoning this project as the sand was dry at 1,485 feet. The Petroleum Securities finished No. 1 Coffee in the Round Mountain Field doing 230 bbls. daily from 1,540 feet early this week and after shutting in this well, transferred the rotary equipment to No. 2 on the same lease, which is scheduled for early spud. The Shell Oil Co. also finished a new well in the Round Mountain Field of Kern County when No. 1 Jewett in Section 19-28-29 was brought in doing 460 bbls. daily from 1,987 feet. The General Petroleum successfully completed another new well in the west front area of the Kern River Field when No. 33 Young was finished on the beam doing 210 bbls. daily from 1,965 feet. Two more wells, Nos. 29 and 32, on the same property, should be finished within the next few days and preparations are being made to start three new wells immediately thereafter. Richfield Oil Co. is also expected to finish two new wells shortly as drilling operations have already been concluded on Nos. 26 and 28 in Section 22-28-27. The Fruitvale Field of Kern County contributed a new well when the Mohawk's No. 5 Red Ribbon was completed doing 571 bbls. daily from 4,158 feet. The Western Gulf's deep test, No. 8-B Kern County Land Co., is rotating ahead in a hard sandy shale at 7,280 feet. The Taft Drilling Co. has focused the attention of operators on the area southeast of Fruitvale by picking up an oil sand in its No. 1 Delfino. This well will either extend the Fruitvale Field 3 miles southeast or prove up another new field at Union Avenue if commercial production is secured. It is the general consensus of opinion that it will open up a new field in the Union Avenue area, which is located about 3 miles southeast of Bakersfield, as the Western Gulf Oil Co. drilled four wildcats just to the north and found favorable indications in two of them. The Taft Drilling Co. is drilling No. 1 Delfino on dry hole money appropriated by several concerns holding substantial acreage surrounding the well. These include the Pacific Western Oil Co., George F. Getty, Union, Shell, Standard, Western Gulf and The Texas Company.

Santa Barbara

The recently discovered Santa Barbara Field, located up on the Mesa approximately 3 miles west of the city of Santa Barbara, has failed to come up to expectations and the outlook is exceedingly dark. Shortly after this field was discovered the writer predicted that not over 50 per cent of the wells scheduled to be drilled in this area could ever hope to pay out because of the limited amount of oil sand present and the low price which this oil would command, due to the fact that it was heavy unrefinable crude. Subsequent developments have indicated that even this conservative statement was too optimistic as it does not look as though more than a few wells will even be able to develop production let alone pay out. The productive limits as far as the present horizon is concerned have been definitely determined on all directions. The Union Oil Co., in abandoning No. 1 Durer as a duster at 2,504 feet, has marked the eastern end of production, while No. 2 Carpenter of the same company, located less than 200 feet north of the discovery well, establishes the northern limits of production as this project has been shut down at 2,172 feet.

(Continued on Page 114)

IMPORTANT NORTHERN CALIFORNIA WILDCATS

Company, well, location—	S-T-R	Depth	Status
Standard, No. 5-9 Saticoy, Ventura Co.	10- 2-22	7,450	br. sh. drilling
American Oil Co., No. 1 Camarillo, Ventura Co.	33- 2-20	1,208	testing
Bolsa Chica, No. 1-A Temescal, Ventura Co.	4- 4-18	660	br. sh. drilling
Associated, No. 1 Rincon, Ventura Co.	19- 4-24	.....	location
Miley, E. J., No. 2 Red Mountain, Ventura Co.	7- 3-23	1,662	hd. sd. drilling
Shell, No. 1 Simi, Ventura Co.	31- 3-17	3,316	hd. sd. drilling
Continental, No. 1 Sulphur Mountain, Ventura Co.	21- 4-22	3,765	suspended
Continental, No. 2 Sulphur Mountain, Ventura Co.	22- 4-22	6,740	suspended
Continental, No. 3 Sulphur Mountain, Ventura Co.	21- 4-22	1,848	fishing
Lockwood Oil Co., Well No. 1, Ventura Co.	28- 3-21	151	sd. sh. drilling
Milham Explt'n., No. 1-A Buttonwillow, Kern Co.	8-28-23	4,662	gas well, idle
Milham Explt'n., No. 2 Buttonwillow, Kern Co.	8-28-23	2,730	gas well, idle
Milham Explt'n., No. 3 Buttonwillow, Kern Co.	8-28-23	2,694	gas well, idle
Milham Explt'n., No. 4 Buttonwillow, Kern Co.	6-28-23	2,670	gas well, idle
Milham Explt'n., No. 5 Buttonwillow, Kern Co.	5-28-23	2,500	gas well, idle
Milham Explt'n., No. 6 Buttonwillow, Kern Co.	8-28-23	2,676	gas well, idle
Milham Explt'n., No. 7 Buttonwillow, Kern Co.	6-28-23	2,720	suspended
Milham Explt'n., No. 8-A Buttonwillow, Kern Co.	8-28-23	2,673	gas well, idle
Milham Explt'n., No. 9 Buttonwillow, Kern Co.	8-28-23	2,355	hd. sd. drilling
Milham Explt'n., No. 10 Buttonwillow, Kern Co.	8-28-23	2,672	testing
Lincoln Drig. Co., No. 1 Buttonwillow, Kern Co.	6-28-23	190	suspended
Richfield Oil Co., No. 3 Semitropic, Kern Co.	36-27-23	7,618	cemented
Stabler, W. W., No. 1 Comanche Point, Kern Co.	23-32-29	3,409	suspended
Elmer Oil Co., No. 1 Shafter, Kern Co.	8-28-25	6,100	suspended
Elmer Oil Co., No. 1 Bena, Kern Co.	15-30-30	3,000	suspended
Elmer Oil Co., No. 1-A Rosedale, Kern Co.	33-29-26	3,618	sd. sh. drilling
Taft Drig. Co., No. 1 Union Avenue, Kern Co.	2-30-27	4,070	sd. sh. drilling
Shell Oil Co., No. 1 Lerdo, Kern Co.	5-29-27	4,194	sd. sh. drilling
General Pet., No. 1 McFarland, Kern Co.	25-26-25	5,904	br. sh. drilling
Union, No. 2 San Emidio, Kern Co.	5-10-21	3,670	suspended
Currency Pet. Co., No. 1 Jacalitos, Fresno Co.	28-21-14	2,302	suspended
Currency Pet. Co., No. 2 Jacalitos, Fresno Co.	14-21-14	350	redrilling
Hornaday & Huggins, No. 1 Kerman, Fresno Co.	32-14-18	3,715	suspended
Cates Oil Co., No. 1 Joaquin Ridge, Fresno Co.	7-19-15	114	suspended
Oceanside Oil Co., No. 1 Krayenhagan, Fresno Co.	33-22-17	738	suspended
Petroleum Securities, No. 1 Kerman, Fresno Co.	20-20-16	121	sd. drilling
Petroleum Securities, No. 2 Kerman, Fresno Co.	28-20-16	1,604	sd. sh. drilling
Shell Oil Co., No. 1 Westhaven, Fresno Co.	24-19-18	2,524	abandoned
Shell Oil Co., No. 2 Westhaven, Fresno Co.	26-19-18	2,740	survey hole
Shell Oil Co., No. 3 Westhaven, Fresno Co.	27-19-18	2,260	to abandon
Shell Oil Co., No. 4 Westhaven, Fresno Co.	17-19-19	2,050	to abandon
Shell Oil Co., No. 5 Westhaven, Fresno Co.	6-20-18	Rig	rigging up
Shell Oil Co., No. 6 Westhaven, Fresno Co.	6-20-18	Mtl.	building rig
Pismo Dome Oil Co., No. 1 Pismo, San Luis Obispo Co.	5-32-13	368	sd. sh. drilling
Union, No. 1 Huasna, San Luis Obispo Co.	34-32-15	3,700	redrilling
Union, No. 1 North Huasna, San Luis Obispo Co.	12-32-14	3,650	br. sh. drilling
Midwest Refining Co., No. 1 Huasna, San Luis Obispo Co.	34-31-15	990	suspended
Panorama Oil Co., Well No. 1, San Luis Obispo Co.	7-31-21	3,965	br. sh. drilling
Paso Robles Synd., No. 1 Paso Robles, San Luis Obispo Co.	27-27-11	2,291	br. sh. drilling
Shell, No. 5 Guadalupe, Santa Barbara Co.	36-10-35	1,000	hd. sd. drilling
Shell, No. 2 Goleta, Santa Barbara Co.	36- 5-31	5,022	sd. sh. drilling
Petroleum Securities, No. 1 Goleta, Santa Barbara Co.	.....	3,714	sd. sh. drilling
Petroleum Securities, No. 1 Pomatto, Santa Barbara Co.	.....	2,830	sd. sh. drilling
Union, No. 1 Buel Canyon, Santa Barbara Co.	X- 7-31	1,622	redrilling
O'Neil, L. B., No. 1 Los Alamos, Santa Barbara Co.	X- 8-32	1,542	sd. sh. drilling
Western Gulf, No. 1 Point Conception, Santa Barbara Co.	X- 5-33	3,140	coring
Standard, No. 1 Point Conception, Santa Barbara Co.	X- 5-34	2,428	idle, litigation
Standard, No. 1 Point Arguello, Santa Barbara Co.	4- 7-35	112	sd. drilling
Nevada Standard, No. 1 Goleta, Santa Barbara Co.	10- 4-28	4,560	suspended
Barnsdall, No. 3 Goleta, Santa Barbara Co.	.....	601	sd. drilling
General Pet., No. 1 Elwood, Santa Barbara Co.	21- 4-28	4,425	gr. sd. drilling
Pacific Western, No. 1 Naples, Santa Barbara Co.	7- 4-29	3,380	sd. sh. drilling
System Oil Co., No. 1 Orcutt, Santa Barbara Co.	36-10-34	3,811	sd. sh. drilling
Keystone Oil Co., No. 1 Santa Maria, Santa Barbara Co.	33-10-34	1,018	sd. sh. drilling
Wildcat Oil Co., No. 1 Santa Maria, Santa Barbara Co.	20-10-35	759	sd. sh. drilling
Keystone Oil Co., No. 1 Surf, Santa Barbara Co.	18- 7-35	716	hd. sd. drilling
Channel Oil Co., Well No. 7, Santa Barbara Co.	29- 4-27	6,304	suspended
Channel Oil Co., No. 1 Fellowship, Santa Barbara Co.	29- 4-27	1,340	gr. sd. drilling
Pacific Western, No. 1 Gibralter, Santa Barbara Co.	9- 5-27	.....	location
Continental, No. 1 Carpenteria, Santa Barbara Co.	33- 4-25	4,130	gas well
Continental, No. 2 Carpenteria, Santa Barbara Co.	33- 4-25	4,370	br. sh. drilling
Colusa Oil Co., Well No. 1, Colusa Co.	31-15- 4	622	hd. sd. drilling
Italo American, Well No. 1, Colusa Co.	20-13- 3	785	hd. sd. drilling
North Counties Oil Co., Well No. 2, Humboldt Co.	36- 2- 1	2,205	suspended
Humboldt Oil Co., Well No. 1, Humboldt Co.	6- 2- 1	3,041	redrilling
Applegate & Renshaw, Well No. 1, Merced Co.	24- 6-10	3,750	suspended
Kuhns, H. L., Well No. 1, Merced Co.	8-12-19	651	gr. sd. drilling
Calhoma Oil Co., No. 1 Livermore, Alameda Co.	9- 3- 3	1,549	suspended
Shell, No. 1 Dudley, Monterey Co.	15-22- 9	3,481	gr. sd. drilling
Union, No. 1 San Lucas, Monterey Co.	8-23- 8	1,017	fishing
Standard, No. 1 King City, Monterey Co.	X-21- 8	Mtl.	building rig
Marland, No. 1 Bradley, Monterey Co.	32-24-11	5,930	milling
Tuck Oil Co., No. 1 Los Gatos, Santa Clara Co.	15- 8- 1	852	suspended
Dudley Ridge Synd., No. 1 Tulare, Kings Co.	12-23-19	1,305	gas, shut in
Porter, H. B., No. 1 Devils Den, Kings Co.	9-24-17	Rig	rigging up
O'Donnell, J. E., No. 1 Tulare, Kings Co.	7-23-20	Rig	suspended
Associates Pet., No. 1 Lewis Creek, San Benito Co.	5-19-10	501	suspended
Twin States Oil Co., No. 1 Soldani, Mendocino Co.	14-12-17	601	hd. sd. drilling

IMPORTANT SOUTHERN CALIFORNIA WILDCATS

The Texas Company, No. 1 Clearwater, Los Angeles Co.	8- 4-12	2,830	sd. sh. drilling
Standard, Na. 1 Hawthorne, Los Angeles Co.	5- 3-14	6,285	gr. sd. drilling
Hummel, Joseph, No. 1 Redondo, Los Angeles Co.	28- 3-14	....	location
Ohio Oil Co., No. 1 Del Rey, Los Angeles Co.	21- 2-15	Mtl.	building rig
Jackson, R. W., No. 1 Whittier, Los Angeles Co.	19- 2-11	1,477	suspended
Burlingham Pet. Co., No. 1 Compton, Los Angeles Co.	17- 3-13	2,204	suspended
Lee & Brainerd, No. 1 Rosecrans, Los Angeles Co.	17- 3-13	Rig	suspended
Johnson, D. W., No. 1 Compton, Los Angeles Co.	21- 3-13	....	foundation
Jackson, R. B., No. 1 Compton, Los Angeles Co.	8- 3-13	Rig	suspended
Hansen, N. J., No. 1 Watson, Los Angeles Co.	17- 4-13	Rig	suspended
Easton & Smith, No. 1 Calabasas, Los Angeles Co.	19- 1-17	2,982	suspended
Pugh Miller Drig. Co., No. 1 Calabasas, Los Angeles Co.	6- 1-17	2,550	suspended
Russell Oil Co., No. 2 Joughin, Los Angeles Co.	25- 3-17	1,704	cleaning out
Pomona Oil Co., Well No. 1, Los Angeles Co.	32- 1- 8	1,197	hd. sd. drilling
Beard, G. F., No. 1 Brea Canyon, Los Angeles Co.	30- 2- 9	820	sd. sh. drilling
Anchor Oil Co., No. 1 Puente, Los Angeles Co.	19- 2-10	4,320	suspended
Rucker, R. C., No. 1 Puente, Los Angeles Co.	27- 2-10	1,792	gr. sd. drilling
Urmi Oil Co., No. 1 Puente, Los Angeles Co.	31- 3- 8	775	suspended
Shell, No. 1 Coyote, Los Angeles Co.	28- 3-10	4,400	sd. sh. drilling
Prairie Oil Co., No. 1 Montebello, Los Angeles Co.	32- 1-12	4,170	sd. sh. drilling
Monterey Park, No. 1 Jepson, Los Angeles Co.	25- 1-12	4,540	cleaning out
West, L. M., No. 1 El Monte, Los Angeles Co.	16- 1-11	.....	portable rig
Union Oil Co., No. 1 Richfield, Los Angeles Co.	13- 3- 9	808	hd. sd. drilling
Southwestern Drig. Co., No. 1 Richfield, Los Angeles Co.	21- 3- 9	5,777	will test
Queen, J. M., No. 1 Newhall, Los Angeles Co.	22- 3-16	230	sd. sh. drilling
Anderson, P. B., No. 1 Hasley Canyon, Los Angeles Co.	1- 3-16	490	cleaning out
So. Calif. Drig. Co., No. 1 Newhall, Los Angeles Co.	13- 3-16	618	sd. sh. drilling
Pico Dome, No. 1 Hasley Canyon, Los Angeles Co.	14- 3-16	660	hd. sd. drilling
Calif. Eastern, No. 1 Wickham, Los Angeles Co.	32- 5-17	3,517	suspended
Coastline Oil Co., No. 1 Devil Canyon, Los Angeles Co.	21- 5-17	514	suspended
Mesa Pet., No. 1 Newport, Orange Co.	21- 6-10	4,781	gr. sd. drilling
Oil Well Eng. Co., No. 1 Newport, Orange Co.	21- 6-10	2,805	testing
Hall Pet. Co., No. 1-A Murrietta, Riverside Co.	23- 7- 3	Rig	rigging up
Hemet Pet. Co., No. 1 Ward, Riverside Co.	9- 5- 1	3,311	hd. sd. drilling
Imperial Valley Oil Co., Well No. 1, Imperial Co.	32-11-10	2,980	cleaning out
Davenport O. & G. Co., No. 1 San Marcos, San Diego Co.	30-12- 8	847	suspended
Turner, S. S., No. 1 Escondido, San Diego Co.	25-12- 2	2,040	sd. sh. drilling
Borderland Oil Co., No. 1 Encinitas, San Diego Co.	X-13- 4	Mtl.	suspended

New Shallow Pay in Taylor-Link Pool

Developments in Pecos County Holding Attention. Winkler County Proration Upheld by Results. Schleicher 'Dud'

By L. E. Bredberg
Fort Worth Bureau, The Oil and Gas Journal

FORT WORTH, Tex., July 29.—Pecos County continued to hold attention of operators and companies operating in the Permian Basin, while the showing in a wildcat in Schleicher County appeared as a "dud," and possibility of a new pool in Crockett still hung in the balance. Irion County maintained its right to a new pool as the discovery well of Brown & Fox is still holding up to a pumping gauge of 22 bbls. for six hours, this amount only allowed due to the lack of storage with no pipe line yet laid to take the production.

The latest feature of West Texas, coming during the week, was the striking of a new and shallower pay in the new Taylor-Link Pool, 18 miles west of the Yates Pool in Pecos County. This new pay was encountered in W. A. Moncrief's No. 2 University at 915 feet, and Taylor-Link Oil Co.'s No. 2 University from 925-30 feet. The former test is 330 feet from the north line and 2,310 feet from the west line of Section 13, Block 18, three-quarters of a mile southwest of the discovery well of the Taylor-Link Oil Co. A bradenhead was put on the well to control the gas, and 8-inch casing is being run below the gas preparing to drill to the pay horizon of the discovery well. Total depth of the hole is 925 feet, and 15,000,000 feet of dry gas was picked up at this depth. No oil was showing with the gas. The Taylor-Link Oil Co.'s No. 2 University, a south offset of its No. 1, the discovery, had a showing of oil and enough gas to bridge the hole and later blow the bridge out and clean itself, making three heads of about 60 bbls. each. The oil tested 28.1 corrected, same gravity as in the Yates Pool. Later the well was opened up and made a flow of 101 bbls. in 39 minutes, showing up as a regular Yates Pool producer. However, the owners contemplate drilling it to the 1,600-foot horizon, and are now drilling ahead at 937 feet in sand and anhydrite. Surface elevation of the first well is 2,570 feet, 63 feet higher than the latter, or 60 feet higher than the discovery. Top of the salt in this well is 860 feet.

The Continental Oil Co.'s No. 1 University, in Section 10, Block 17, 4 miles southeast of the discovery well, topped the salt at 950 feet, and hit a puff of sulphur gas at 1,005 feet. This soon played out, the hole was cleaned and drilling resumed. Elevation of this test is 2,507 feet.

Fair Sized Pool

All of the above showings, with the amount of gas encountered in the Moncrief well, tends to make this area look considerably promising for a fair sized pool producing likely looking wells of a size comparing to many of the good ones in the Yates Pool, although at present no spectacular well has been brought in in this new area. It still has time, for the discovery well of the Yates Pool, Mid-Kansas and Transcontinental's No. 1-A Yates did not come in as a huge gusher, but remains one of the smaller wells of the field, and it was several weeks after this discovery that the larger ones started showing up and coming in, most of the larger ones being produced many months after the opening of the pool. Consequently this new area has a chance to develop into something good if it follows the characteristics of the most phenomenal pool in the world, the Yates Pool, and time and other tests will tell just what this new pool will make of itself. The discovery well in Section 30, Block 16, is averaging around 150 bbls. daily.

Another surprise of the week in Pecos County, where surprises are many and of varied type, showed up in R. D. Webb's No. 1 fee, 1,900 feet east and 423 feet north of the SW cor., Section 105, Block OW, T.M.R.R. Survey, 6½ miles due west of Fort Stockton. This test encountered 8,277,000 feet of dry gas at 472 feet after encountering the lesser amount of around 200,000 feet at 465 feet. The test is shut down at 472 feet. Buell and others' No. 1 Batchelor, in the N half NE, Section 87, Block OW, about 2½ miles west of this new test, was drilled several years ago and had considerable gas, and a showing of oil at 1,700 feet, and is 6 miles south of the Phillips Petroleum Co.'s No. 1 Courtney (Pryor), which had a shallow pay from 1,345-67 feet and produced 368 bbls. of oil at that depth before drilling deeper.

O'Mara's No. 1 Butz, in Section 54, Block 10, H.&G.N. Survey, 3 miles south of the Pecos Valley discovery well, was shot with 30 quarts from 1,335-61 feet and flowed 35 bbls. after it was cleaned out. It is now swabbing around 35 bbls. daily and promises to make a small producer on the pump. Total depth is 1,377 feet.

Will Cause Other Tests

Doran & McGee's No. 1 Pecos Valley Oil Co., in the southern corner of Section 34, 1 mile north of the Pecos Valley wells, is now showing for about 16 bbls. daily from pay encountered from 1,535-40 feet. Total depth of this test is 1,670 feet, but was plugged back to 1,580 feet to shut off sulphur water which was encountered at 1,662 feet. Although a small well it means the extension of this northern Pecos County Pool, and will be the cause of drilling other tests in the area, for the acreage is cut up into comparatively small plats, owned by different companies, and they will all eventually drill to test their own holdings.

Plymouth Oil Co.'s No. 2 Perry, in the NE, Section 29, Block 178, T.C.R.R. Survey, Pecos County, a southwestern extension of the Yates Pool, finally came out on top as a well this week when it was completed as a 47-bbl. flowing well. Total depth is 1,858 feet, but it was plugged back to 1,845 feet to shut off sulphur water which was struck at 1,856 feet and increased at 1,858 feet. Top of the pay is 1,792 feet.

While this well claimed a half-mile extension to the pool, still another well up in the pool went to water and will undoubtedly be plugged. This well is the Mid-Kansas and Transcontinental Oil Co.'s No. 4-G Yates in the Vacancy Strip, Section 34½, 870 feet west of the most easterly east line and 1,450 feet south of the south line of the Runnels County School land, on the northeastern edge of the pool. The well was completed in October, 1928, after encountering the pay at 1,330 feet, and pumping 22 bbls. daily from a total depth of 1,334 feet. It was later deepened to 1,392 feet, but encountered sulphur water from 1,390-92 feet, and plugging seems to be the only recourse.

The last shallow producer in the field, the Mid-Kansas - Transcontinental Oil Co.'s No. 30-A Yates, which came in last week flowing over 700 bbls. from a shallow pay from 245-50 feet, and bottomed at 278 feet, has declined to about 85 bbls. daily on the pump, pumping through a 3-inch tubing, consequently this spectacular producer will undoubtedly be deepened a little later.

Plugged to Prevent Seepage

Another well which was plugged in the Yates Pool, an excellent producer of the past, Mid-Kansas and Transcontinental's No. 6-A Yates, in the Yates Vacancy Strip, south and east of the SE cor., Section 60, Block 1, I.&G.N. Survey, was plugged to help prevent the large amount of seepage oil and waste. This test came in with an initial production of 500 bbls. an hour from a total depth of 1,045 feet, after topping the pay at 935 feet, but due to its flowing behind the casing, and causing a great amount of wastage it was considered better to plug the hole and prevent this continuance. This is one way to control the waste in seepage oil, and probably other companies having the same problems to contend with, will do likewise and abandon wells which are practically all flowing away from them and being picked up in the river bed or by shallow wells which are sunk for the purpose of gathering this seepage oil. The question of gathering it has caused considerable controversy, even carried up to the Railroad Commission at Austin to solve, but such seepage oil gathered by the companies has not been put on the proration amount of daily production, and the question of gathering it and producing it has been left up to the companies.

Gulf Production Co.'s No. 7 Waddell, in Section 10, Block 23-B, Public School Lands, is still striving to pull itself into the producers' class. Five hundred feet of sulphur water was encountered at 3,600 feet, the hole drilled to 3,610 and plugged back to 3,567 and shot with 230 quarts from 3,325-45 feet, after which the hole filled up 600 feet with oil in 1½ hours. During the next 12 hours it filled to the top and made one small head, and stopped flowing with a hole full of oil. It was swabbed down and again shot with 320 quarts from 2,972-3,140 feet, this time 40,000,000 feet of gas blowing as a result of the shot.

Schleicher County Failure

Schleicher County's showing does not loom up now quite as promising as it did last week when Phillips Petroleum Corp.'s (Interstate) No. 1 Whitten, in Section 35, Block LL, T.C.R.R. Survey, encountered a showing of oil from 4,110-12 feet in the Pennsylvanian, and the hole filled 400 feet with fluid, later rising to 900 feet. During the week 6⅝-inch casing was wet with packer at 4,147 feet, and the hole drilled to 4,152 feet. inch casing was set with packer at 4,147 feet to deeper depths, but 4,152 feet is a good estimate. It bailed down in 30 hours, bailing practically all water, with but little oil, showing that deepening the hole did not increase the latter, and that the water was coming from the bottom of the hole. As the test now stands, it looks as if the promise of last week is all off, and that the well will probably be plugged at a little later date, although last week reports made this area appear as if it was also coming in for its share of the great amount of attention bestowed upon West Texas and its many possibilities.

ESTIMATED DAILY AVERAGE PRODUCTION WEST TEXAS
Week ending July 27

County—	Wells	Prod.
Crane County	309	36,052
Crockett County	43	1,688
Ector County	3	....
Fisher County	7	1,000
Glasscock and Howard	357	43,257
Jones County	83	3,445
Loving County	13	595
Mitchell County	142	2,645
Pecos County	316	139,962
Reagan County	243	18,129
Runnels County	3	42
Scurry County	5	33
Upton County	238	8,996
Ward County	7	1,521
Winkler County	602	139,798
Total this week	2,371	397,163
Total last week	2,363	398,689
Difference	8	1,526

Irion County Well

No disposition has yet been made of the production from Brown & Fox's No. 1 Tankersley, in Irion County, and due to lack of pipe line connections and storage, the well is now pumping only 6 hours every day, yielding about 22 bbls. during each period, and proving that the well is the harbinger of a new pool in this county, the first pool. It seems as if the Humble Pipe Line Co. and the San Angelo Refining Co. did not make any contract with the owners, as per many reports broadcast by publications, and the latest rumor is that some refining firm in Eldorado, Ark., is contemplating taking the output, which will necessitate a short line to a loading rack at the nearest point on the Orient Railroad, where the production will be loaded out on tank cars.

Another interesting happening in Crane County took place this week when Gulf Production Co.'s No. 30 J. T. McElroy was deepened from 2,873 feet to 2,912

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WILDCAT OPERATIONS IN WEST TEXAS

Week Ended July 27

Company, farm and location—	Remarks—
ANDREWS COUNTY	
Mid-Continent Oil & Gas Co.'s No. 1 Fisher, 1,320 ft. N and 200 ft. E of SW cor. Sec. 5, Blk. A-36	Top salt 1,720 ft.; running 8¼-in. casing 3,355 ft.; rainbow show oil 4,476 ft.; 3,700 ft. salt water 4,658 ft.; drlg. out plug 4,670 ft.
BORDEN COUNTY	
Louisiana Oil & Ref. Co.'s No. 1 York, 330 ft. from N, and 1,320 ft. from W Sec. 322, Blk. 97, H.&T.C.R.R. Sur.	Location.
Moncrief et al's No. 1 Munger, C of SW Sec. 14, Blk. 31	Bldg. rig.
Teas & Wheeler's No. 1 Long, 1,320 ft. N and E of Sec. 27, Blk. 30, T.&P. Sur.	Drlg. 995 ft.
BREWSTER COUNTY	
E. W. Bateman et al's No. 2 Nevill, 2,000 ft. S and W line of Sec. 62, Blk. 13, G.H.&S.A.R.R. Sur.	Drlg. 530 ft.
Brewster Oil Co.'s No. 1 fee, 2,640 ft. S and 2,598 ft. E of NW cor. Sec. 45, Blk. G-15, G.C.&S.F.	Fishing 1,935 ft.
Cowden & Bowser's No. 1-A Jackson & Harmon, Sec. 1, Blk. 331, T.C.R.R. Sur.	Set 8-in. 1,530 ft.; shut down 2,000 ft.
Forrest Oil Co.'s No. 1 Skinner, C SW SE Sec. 100, Blk. 2, G.C.&S.F. Sur.	Shut down 300 ft.
J. M. Hickey's No. 1 Jackson & Harmon, NE cor. Sec. 182, Blk. 9, G.H.&S.A. Sur.	Shut down 1,302 ft.
Johnson & Weekley's No. 1 Jackson & Harmon, C Sec. 104, Blk. 10, G.H.&S.A. Sur.	Drlg. 2,095 ft.
Van McPhail's No. 1 McIntyre, SE cor. Sec. 59, Blk. 352, 7 mi. S of Alpine	Shut down 1,740 ft.
COKE COUNTY	
Lipan Oil Co.'s No. 1 E. C. Rawlings, Sec. 390, Blk. 1-A, H.&T.C. Sur., elev. 2,750 ft.	Cleaning out 2,855 ft.

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Cooke County Well Flowing 3,700 Bbls

Oil Is 40 Gravity from Total Depth of 1,466 Feet, a New Pay Horizon. Prospective New Pays in Jack and Young Counties

By L. E. Bredberg
Fort Worth Bureau, The Oil and Gas Journal

FORT WORTH, Tex., July 29.—Cooke County, in the Wichita Falls district, held the spotlight on the stage of activities during the week with Jack County running a close race while Wilbarger County drew attention by a big extension to its Boggy Creek Pool. Gray County upheld its prestige with a 3,600-bbls. increase over the past week, and Brown, Shackelford and Eastland Counties proclaimed themselves as the most interesting areas in the Ranger district for the week.

Cooke County now rates among the counties having phenomenal wells since the Kewanee Oil & Gas Co.'s No. 6-B Timmis (Hyman), located 150 feet east and 2,130 feet south of the northeast corner of the J. L. Stephens Survey, in E.T.R.R. Survey, Abstract 363, caused untold excitement when it flowed 4,370 bbls. the first 24 hours, 3,965 bbls. the second 24 hours and is still flowing 3,700 bbls. of 40 gravity (corrected) oil from a total depth of 1,466 feet after topping the first pay from 1,280-86 feet, then encountering a sand and shale showing oil from 1,390-1,418 feet, and a saturated lime from 1,418-36 feet. This feat is the first of its kind in this area and opens up vast possibilities for the Bulcher Pool, no doubt causing a deepening campaign to tap this new pay horizon and bring in other similar wells of its caliber by the companies holding the acreage surrounding it and having producing wells from the above pay horizon.

Since this well was completed for such a remarkable amount of production, the company has completed its No. 5-B Timmis (Hyman) for around 2,000 bbls. flowing from the pay topped at 1,155 feet. This test is the north offset to No. 6-B.

Bulcher Pool Extension

The second producer in the extension to the Bulcher Pool, 2½ miles southeast, the Danciger Oil & Refining Co.'s No. 1 Huggins, a south offset to the discovery well of the Fain-McGaha Oil Corp.'s No. 1 Huggins, topped the pay from 1,148-1,155 feet, where at the latter depth it was shut down swabbing at the rate of 235 bbls. in 12 hours, and making 450 bbls. the first 24 hours. This second producer in the extension is located in center of the east line of the Huggins 154-acre tract in the S.P.R.R. Survey, Abstract No. 982, and makes this extension almost as promising as the original pool to the northwest. Other tests being put down in this new area will be watched with interest to see just how large a new area has been opened by the Fain-McGaha discovery. The Humble Oil & Refining Co.'s No. 2 Field & Bowers, offsetting the Danciger well, swabbed 187 bbls. in 12 hours from pay topped from 1,180-86 feet.

Like New Pool Opener

Bradstreet & Grisham drilled in and tested their No. 1 Waggoner, 205 feet from the south line and 750 feet from the west line of the S half NE, Section 37, Block 4, H.&T.C. Survey, Wilbarger County. It topped the pay at 1,928 feet and drilled to 1,941 feet flowing 106 bbls. the first 24 hours. This location is approximately 2½ miles north of the Boggy Creek Pool in Section 40, M.E.P.&P. Survey, and looks like a new pool opener in this section, helping to raise the production of this county to new dimensions.

Jack County Deep Pay

Last week The Texas Company aroused much interest in Jack County when its No. 1 Shanafelt, in the Isaac Hughson Survey, in the Bryson Pool, picked up a deep pay from 4,569-70 feet and the hole started filling with oil, the well later flowing 46 bbls. This pay is a sandy lime, the second deep one to be picked up in this county, the Shell Petroleum Corp. encountering it the first time about 9 miles southeast on the same trend. The second 24 hours flowing gauged 56 bbls., the third 24 hours 86 bbls. and the fourth 24 hours 70 bbls. and the fifth 24 hours 61 bbls., proving beyond a doubt that it is a commercial producer from this new deep pay. Total depth is 4,574 feet. This well has already caused offsetting companies to start drilling their wells deeper, one being the Republic Production Co. which is drilling a test to the east on the Mary A. Bryson farm in the same survey. The Prairie Oil & Gas Co. is also reported deepening one of its wells near The Texas Company discovery, and many others are expected to follow suit soon.

Young County Deep Pool

In Young County, G. A. Horal's No. 1 Morrison, in the SE cor., Section 431, T.E.&L. Survey, east of the town of New Castle, which encountered a deep sand last week at 3,809 feet and filled 1,200 feet with oil in 24 hours, and 2,400 feet in a little longer time, is still standing with a hole full of oil, due to the rig catching fire and burning to the ground, and the inability to test the well. However, this test looks most promising of opening a new deep pool in this part of the county, and will be closely watched for results as soon as the rig can be rebuilt and the well put on test.

The Panhandle district showed a gain of 4,553 bbls. daily average over the past week, most of this gain due to big producers put on production in Gray County, with an 800-bbl. gain in Hutchinson from several good completions. The Wichita Falls district only gained the small amount of 306 bbls. over the previous week, most of the counties holding to a level keel. Brown County helped swell the Ranger district's daily average with 799 bbls. increase, with small gains by Callahan and Eastland Counties.

Smith-Ellis Extension

Northwest of the town of Thrifty, the E. L. Smith Oil Co.'s No. 1 L. A. George in Section 42, H.&T.B.R.R. Survey, created a northern extension of the Smith-Ellis Pool when it topped the Fry sand from 1,289-1,305 feet and came in flowing 373 bbls. This new discovery is 150 feet out of the southwest corner of the R. C. Chaddic farm and opens up considerable territory for exploration. The well was first shut down at 1,298½ feet flowing 250 bbls. the first 24 hours with a considerable amount of gas, but was later deepened to the present total depth of 1,305 feet and flowed 373 bbls. the first 24 hours after it was shut down.

Roeser & Pendleton and Continental Oil Co. completed three good gassers this week in the Cook Pool, Shackelford County, when their No. 5-A-88 Cook came in gauging 12,000,000 feet of gas, spraying oil from a pay at 1,384-88 feet, at which latter depth it was shut in. Their No. 8-A-88 Cook also topped an oil and gas sand from 1,388-1,410 feet and was shut in at 1,410 feet making 15,000,000 feet of gas and spraying oil, and their No. 9-A Cook came in for a like amount from sand encountered at 1,371 feet.

Barnsdall Oil Co.'s No. 1 Harrison in the NE cor., Section 5, Block M, Moore County, which encountered a 500,000-foot show of gas at 3,195 feet last week, but later struck salt water from 3,427-40 feet, was abandoned at 3,510 feet.

The Morris Pool, northeast of Coleman, and the Taylor-Link, north of Shield in Coleman County, are the hottest areas in Coleman County, many wells drilling at present with several new locations announced.

ESTIMATED DAILY AVERAGE PRODUCTION

Week Ending July 27, 1929

Panhandle district —	Prod.
Carson County	7,572
Hutchinson County	25,032
Gray County	60,236
Moore County	1,450
Potter County	0
Wheeler County	939
Total this week	94,929
Total last week	90,373
Increase	4,556
Wichita Falls District—	Prod.
Archer County	19,807
Baylor County	68
Clay County	685
Cooke County	6,005
Foard County	100
Jack County	3,208
Haskell County	100
Montague County	6,961
Throckmorton County	795
Wilbarger County	28,902
Young County	10,832
Wichita County	26,759
Total this week	104,222
Total last week	103,916
Increase	306
Ranger District—	Prod.
Brown County	7,960
Callahan County	4,325
Coleman County	6,050
Comanche County	1,160
Palo Pinto County	380
Eastland County	5,280
Shackelford County	11,050
Stephens County	6,873
Total this week	44,078
Total last week	43,279
Increase	799
Grand total this week	243,229
Grand total last week	237,568
Increase	5,661

WILDCAT OPERATIONS IN TEXAS PANHANDLE

Week Ending July 29

CARSON COUNTY

Company, well, farm, name, section and block—	Remarks—
Baber and Shell Pet. Corp.'s No. 1 Percival, 330 ft. S and W, NE cor. E½ SE, Sec. 199, Blk. 3, I.&G.N. Sur.	Location.
Empire G. & F. Co.'s No. 1 Deahl, 660 ft. from N line, 660 ft. from W line, Sec. 21, Blk. Y-2	5,000,000 ft. gas 2,427-2,705 ft; drlg. 2,945 ft; 14,000,000 ft. gas.
Empire G. & F. Co.'s No. 1 M. P. Co. "C," 330 ft. N and W, SE cor. NW, Sec. 108, Blk. 4, I.&G.N.R.R. Sur.	Location.
Gulf Prod. Co.'s No. 1 Garner-B, 330 ft. N and W SE cor. SW, Sec. 106, Blk. 4, I.&G.N.R.R. Sur.	Set 8¼-in. csg. 2,570 ft.
Gulf Prod. Co.'s No. 7 Noel, 330 ft. S and W NE cor. SW, Sec. 198, Blk. 3, I.&G.N. Sur.	Drlg. 2,540 ft.
Herragan Oil Co.'s No. 1 L. C. McConnell, 330 ft. N and W line W½ SW, Sec. 187, Blk. 3, I.&G.N. Sur.	U.R. 2,090 ft.
Magnolia Pet. Co.'s No. 7 fee, 990 ft. from W line, 890 ft. from S line SE, Sec. 91, Blk. 4, I.&G.N. Sur.	Drlg. 1,225 ft.
McConnell O. & G. Co.'s No. 1 McConnell, 330 ft. from N line, 330 ft. from E line W½ NE, Sec. 65, Blk. 4, I.&G.N.R.R. Sur.	S.D. 2,960 ft.
Midwest Expl.n. Co.'s No. 2 Cooper, 990 ft. from S line and 330 ft. from W line W½ NW, Sec. 5, Blk. 9, I.&G.N. Sur.	T.D. 3,096 ft; pay 3,025-30 ft; swbd. 200 bbls; C.O; to shoot.
Midwest Explt.n. Co.'s No. 3 Cooper, 990 ft. S and 330 ft. E NW cor. W½ NW, Sec. 5, Blk. 9, I.&G.N. R.R. Sur.	Drlg. 1,875 ft.
Osborne et als' No. 2 Percival, 330 ft. N and W, SE cor. E½ NE, Sec. 199, Blk. 3, I.&G.N. Sur.	Location.
Reynolds et als' No. 2 Cooper, 330 ft. from S and W lines, E½ NW, Sec. 5, Blk. 9, I.&G.N. Sur.	Location.
Ryan Oil Co.'s No. 3 Black, 990 ft. from S line, 330 ft. from E line NE Sec. 111, Blk. 4, I.&G.N.R.R. Sur.	Drlg. 2,380 ft.
Ryan Oil Co.'s No. 4 Black, 990 ft. from N line and 330 ft. from E line NE Sec. 111, Blk. 4, I.&G.N. Sur.	Drlg. 2,388 ft.
Skelly Oil Co.'s No. 15 Schafer, 330 ft. from S line and 330 ft. from W line NE, Sec. 198, Blk. 3, I.&G.N.	Drlg. 3,135 ft.
Stubblefield's et als' No. 1 Garner, 330 ft. from S and E lines SE, Sec. 104, Blk. 4	Drlg. 530 ft.
Timmis et als' No. 2 Garner, 330 ft. from N line and 330 ft. from E line SW SW, Sec. 113, Blk. 4, I.&G.N.	Set 8-in. csg. 2,232 ft.
Travis et als' No. 1 D. A. Harrel, C NE NE, Sec. 162	

CASTRO COUNTY

Colorado O. & R. Co.'s No. 1 M. Slemmons, SW cor. Sec. 73, Blk. M-17, B.S.&F. Sur.	Rig blown down.
Mystery Oil Co.'s No. 1 J. I. Crum, SE cor. NE, Sec. 333, Blk. M-6, S.K.&K. Sur.	S.D. 510 ft. for csg.

CHILDRESS COUNTY

C. L. Sloane et als' No. 1 B. P. Smith, Sur. 49, F. P. Knott lands	S.D. 4,486 ft.

COCHRAN COUNTY

Continental Oil Co.'s No. 1 Slaughter-A, 330 ft. from W and 430 ft. from S lines, League 130, Carson County School land	Drlg. 4,200 ft.

COTTLE COUNTY

Explt.n. Co.'s No. 1 Richards	S.D. 3,612 ft.
Explt.n. Co.'s No. 3 Matador Land & Cattle Co., C, Sec. 46, J. H. Stephens Sur.	S.D. 3,227 ft.
Sun Oil Co.'s No. 1 T. B. Yarborough, 485 ft. S and 2,460 ft. E NW cor. Sec. 551, Blk. H, W.&N.W. Sur.	Drlg. 4,310 ft.

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WICHITA COMPLETIONS

Week Ending July 27

Archer County

Brown and United Producers Corp.'s No. 6 Taylor topped the pay at 1,486-88 feet and had an initial production of 60 bbls. of oil and 5 bbls. of water. L. T. Burns' No. 3 McCrary topped the pay at 1,220 feet, was drilled to a total depth of 1,239 feet and had an initial production of 28 bbls. L. T. Burns' No. 4 McCrary had an oil show at 1,427 feet, was drilled to a total depth of 1,434 feet and had an initial production of 70 bbls. Gwynn and Archer Drilling Co.'s No. 3 Oil Investment Co. had an oil show at 1,585 feet, was drilled to a total depth of 1,596½ feet and had an initial production of 40 bbls. Pace and others' No. 1 Mankins had an initial production of 5 bbls. at 696-98½ feet. Pace and others' No. 2 Mankins was dry and abandoned at 2,002½ feet. Perkins, Cullum and others' No. 11 Wilson had an initial production of 15 bbls. at 1,227-41 feet. Bridwell Oil Co. and Continental Oil Co.'s No. 1 Falls County had an initial production of 20 bbls. at 1,123-39 feet. Their No. 2 Logan and others had an initial production of 15 bbls. at 1,140-43 feet. Continental Oil Co.'s No. 3 Falls County was dry and abandoned at 1,303 feet. Its No. 8 Richardson was dry and abandoned at 1,205 feet. Estracado Oil Co.'s No. 5 Prideaux had an initial production of 15 bbls. at 657-58 feet. Freeman Oil Co.'s No. 7 Henning had an oil show at 1,435-44 feet, was drilled to a total depth of 1,446½ feet and had an initial production of 30 bbls. C. W. Gilliland's No.

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Pipe Line Construction News

LONE STAR GAS TO LAY NEW LINE TO DALLAS

DALLAS, Tex., July 27.—The Lone Star Gas Co. announces it will start laying a 20-inch line, 135 miles in length from Panhandle gas fields to Fort Worth and Dallas, the capacity of the line to be 100,000,000 feet of gas daily, a considerable quantity going to the various towns along the main line.

The line is to be a welded line, costing around $1,000,000 and the company expects to have it completed in about 45 days. The main pressure station is at Petrolia in Clay County. This will be the largest line in this part of the state, and will help divert Northwest Texas gas to southern points. There is now one 16-inch line and one 10-inch serving Fort Worth from the Petrolia station, and this new line will make the third. Crews are to start working on both ends of the line.

Distribution plants of the Lone Star Gas Co. are now being built at Hamilton, Whitney and Valley Mills in the south central part of the state where the company is building more lines to serve towns in that area. From Desdemona to Sipe Springs it has 77,200 feet of pipe strung and 46,000 feet laid, and is busy laying lines to the other towns from the Desdemona gas field and station

PLAN NEW LINE FOR FORT SCOTT, KANSAS

An 8-inch natural gas pipe line, approximately 50 miles in length, will be constructed from the Petrolia, Kans., compressor station of the Cities Service Gas Co. to Fort Scott, Kans. Work on this project will begin as soon as the survey is completed, and natural gas will be turned into the line by November 1, company officials announced.

This project involves the purchase of the pipe lines and production of the Union Gas Co., from which Fort Scott has been receiving its supply, and which will continue in operation. In addition to furnishing Fort Scott with a permanent and reliable supply of natural gas for both domestic and industrial consumption, this service will also be available to Nevada, Mo., and cities adjacent to the area the line traverses.

The Fort Scott connection will be made direct with the three 16-inch lines into the Petrolia station, which receives its gas from the southern Kansas and Oklahoma fields.

BAIRD SUCCEEDS BAY

George H. Baird, formerly operating engineer for the natural gas division of the Cities Service Gas Co., has been selected to succeed Burt Bay as superintendent of operations of the company, according to an announcement made recently by H. L. Montgomery, manager of the Cities Service Gas Co. Mr. Baird has been with the organization since 1916, shortly after his graduation from the Kansas State Agricultural College. Mr. Baird is an active member of the Pipe Line Flow Committee of the American Gas Association.

SOUTHWESTERN ORDER PLACED

YOUNGSTOWN, Ohio, July 27.—Republic Iron & Steel has received its first large order for steel pipe produced by electric welding method under Johnson patents. It is from Southwestern Gas Co. and calls for 200 miles of 6-inch tubing, involving 8,000 tons. Republic now has one mill in operation, producing pipe by electric welding up to 7 inches in diameter, and is installing two additional mills. Youngstown Sheet & Tube is also experimenting with this method of production.

WORST WEATHER IN YEARS ATTENDS LONG PIPE LINE CONSTRUCTION JOB

The worst weather conditions in 25 years are declared to have attended the job of laying the Prairie Pipe Line Co.'s oil line from Panova Station, Shawnee, in Oklahoma, to the Indiana state line at Chicago Heights. When the work was started on February 15, 1929, frost filled the ground. Warmer weather which came later melted this frost and produced thick mud. Then came torrential rains which frequently made continuance of work impossible and which left more mud for the different gangs to fight.

The ditching and backfilling were done by the Sheehan Pipe Line Construction Co., of Tulsa. The Prairie company applied protective coating to the pipe and laid it in the trench. The original contract with the Sheehan company called for 467 miles of ditch comprising 30 loops. Later three loops were added. These totaled 42 miles, thus making the aggregate length of the ditch dug and filled 509 miles. The longest loop contained 41 miles and the shortest 4 miles.

Frost, Mud and Storms Interfere

The ditching and filling contract was completed on May 20, three months and five days after the work was started. Faster time has been made on similar contracts, but doubt is expressed as to whether more hostile weather ever was encountered in pipe line construction in that region. Twenty-eight days' lost time was recorded. Besides this the workmen often were seriously handicapped by frozen ground, mud and storms.

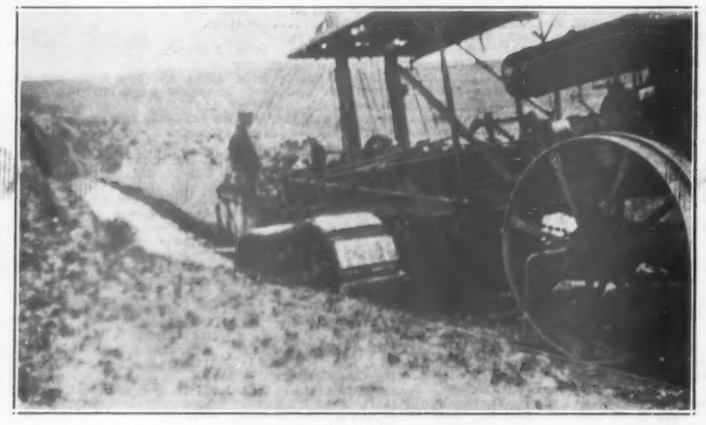
The Sheehan company put three gangs to work at the outset. There were about 60 men in the three gangs. The number of gangs was increased until for a time 18 were at work. Eleven of these were ditching machine gangs and seven were hand tool gangs. The latter used pick and shovel in spots where the tractor could not be utilized. Five hundred to 1,500 men were on the payroll at various stages of the work.

Modern Equipment Accomplishes Task

Although neither the Sheehan company nor the Prairie Pipe Line Co. regards the Shawnee-Chicago Heights job as extraordinary in these days of gigantic engineering enterprises, it offers an excellent example of what is being achieved through use of modern mechanical equipment and the application of advanced scientific methods. Without the motor-driven ditcher and backfiller, the motor truck for carrying the pipe to the point needed, time-saving devices for applying protective coating and well organized groups of workmen under trained supervision such a task would have seemed almost impossible of accomplishment.

Two sizes of pipe were used in the line. There are 330 miles of 8-inch and 179 miles of 12-inch. The line was designed to carry crude from the Seminole Field to eastern refineries.

Even when the tractor is on the ditch-digging job the old-time pick and shovel have their uses on a steep hill.



One of the ditching machines used on the Panova-Chicago Heights pipe line project.

PIPE ORDER PLACED FOR LINE TO CHICAGO

By B. E. V. Luty

PITTSBURGH, Pa., July 29.—The biggest line pipe order in the history of the business has been placed, 191,000 tons of electrically welded pipe to be made by the A. O. Smith Corp., Milwaukee, for a 950-mile line from the Texas Panhandle to Chicago. Full details as to sizes involved are not available, but the figures given would indicate an average weight of 76 pounds per foot, which would indicate a rather heavy walled 20-inch pipe, as eleven-thirty-second inch thickness is figured to run 72 pounds. The order is placed by the Central States Natural Gas Co., several gas producing companies being interested. Smith's capacity is stated to be 26 miles daily so that even that large capacity if devoted entirely to the order would require about seven weeks. As a matter of fact various other orders are on books. While there is no official statement as to the price it is reported that it was in the neighborhood of $3.57 per foot, which would be about 4.7 cents per pound, making about $18,000,000 for the 950 miles.

The Imperial Co. of Canada has authorized a 500-mile natural gas line from Turner Valley in Saskatchewan to Winnipeg, and is planning other lines from this field. In connection with recent talk about piping gas to New York City it is pointed out that even the nearest field, that around Charleston, W. Va., would involve a line of some 400 miles.

The regular pipe mills making large diameter pipe are well filled with orders for such pipe for at least two months to come, Smith being filled much farther ahead than that. With so much buying in prospect the pipe mills have prospects for a good second half-year in large diameter pipe, better than the first half. The seamless tube mills have been receiving a fair amount of oil country goods business and there is no particular change in the volume of such business at present. In standard or merchant pipe the mills are doing about as well as a year ago, and on the whole incoming business in standard pipe is slightly above the average during the first half of the year.

OIL THROUGH NEW LINE

The Texas Corp. has completed and started running oil through its new pipe line from West Texas to the company's tank farm at East Houston. The line ran 57,500 bbls. of oil July 18, the first day of operation. The Texas Corp. is reported to have 7,500,000 bbls. of oil in storage in West Texas, supplemented by its daily output of about 13,000 bbls. This production is coming from the Church-Fields and McCamey districts, Lea County, New Mexico, and the Yates and Hendricks Pools. The company has 260,000 acres in Lea County, New Mexico, and is building a 40-mile pipe line extension to the Lynch well, which is now producing about 1,000 bbls. daily.

NEW CONTINENTAL LINE

Continental Oil Co. is reported to have authorized the construction of a 55-mile pipe line connecting its Wichita Falls pipe line system with the Cooke Poole, Shackelford County, Texas. It has also, it is said, authorized construction of a connecting link in pipe line systems of Marland in northern Oklahoma with that of Continental in the Seminole area. With completion of these lines it is supposed Continental will become a more active crude buyer in the Mid-Continent and operations at its Ponca City refinery may be increased.

SHEEHAN

PIPE LINE

CONSTRUCTION CO.

TULSA, OKLA.

OKLAHOMA FIELDS

(Continued from Page 50)

watomie County, is a location. It is a semiwildcat and also a community test with the Phillips Petroleum Co., Gypsy Oil Co., Prairie Oil & Gas Co., Carter Oil Co., Pure Oil Co., The Texas Company, Shell Petroleum Corp., and Darby Petroleum Co., pooling their acreage to prove up their acreage in this vicinity.

Sinclair Oil & Gas Co. and McGraw Oil Co.'s No. 1 Kelly, NE cor. NW NE, Section 2-7-4, Pottawatomie County, made 1,520 bbls. from the Wilcox sand at 4,328-35 feet. It is the only Wilcox sand well of importance in the north extension to the St. Louis Pool.

Second Test Drilled

Tidal Oil Co.'s No. 1 Halverson, C SW cor. NE, Section 8-4-2, Garvin County, had the top of the Viola lime at 3,730 feet. After drilling to a total depth of 3,865 feet, the 8-inch casing was cemented. This wildcat is the second test in this vicinity drilled by the same company.

Independent Oil & Gas Co. has purchased a half interest in the SE SW, Section 35-8-4, Pottawatomie County, in the north extension to the St. Louis Pool, from the Range Oil Co. of Okmulgee, Okla., and has made a location for No. 1 in the SE cor. SW. The consideration was not given out.

The Sasakwa Pool, north of the Allen Field, is slowly declining. The gauge of the field for July 29 was 8,036 bbls. The Signal Oil Co.'s No. 1 Bond, in Section 13-6-7, Seminole County, which extended the field a mile southwest, is still pinched. The well was opened up for a test last week and for a period of 24 hours it made 392 bbls. of oil and 15 bbls. of water. This is the first open-flow test the owners have made of this well. The Prairie Oil & Gas Co.'s No. 1 Patton, in Section 18-6-8, has quit flowing.

The production in the pool is expected to remain about the same for the next two or three weeks until the new drilling wells reach the sand. Indian Territory Illuminating Oil Co.'s No. 1 Porter, NE cor., Section 24-6-7, Seminole County, had the Wilcox sand at 4,306-10 feet with a hole full of water. It will be abandoned. The Texas Company's No. 1 Bryant, SE cor. NE SW, Section 9-6-8, a mile east of the Sasakwa Pool, made 92 bbls. in 24 hours on the pump.

Noble County to Be Tested

Noble County is to be tested for oil and gas by the Prairie Oil & Gas Co., Peerless Oil Co., and the Washoma Oil Co. The companies expect to announce a wildcat location in Township 22-1e, and the test is to be started in the near future.

In the Okmulgee district operations have been quiet. The daily average production of the producing wells in the Josey Pool for the last week was 1,350 bbls. All the flowing wells are showing water. This is also true of the pumping wells. This is the property that recently changed hands, when The Texas Company bought all the oil-producing property of the Josey Oil Co. The Josey Pool is located in Sections 33, 34, 12 and 11, Okfuskee County. The Champlin Oil & Refining Co. has completed a failure in the Wilcox sand in the Cary Pool. It is the No. 1 Campbell, SE cor. NE SW, Section 29-12-10, Okfuskee County. The test encountered Wilcox sand at 3,895-3,920 feet with a hole full of water. The test is being plugged back to the Papoose sand, where it was producing about 30 bbls. a day. This was the first Wilcox sand test in the Cary Pool.

Nine new locations have been made by companies owning property adjoining the new Dutcher sand wells in Section 18-16-9, Creek County. Prairie Oil & Gas Co. plans four locations, Carter Oil Co. two, Selby Oil & Gas Co. two, and Texas Pacific Coal & Oil Co. one. Two wells have been completed recently by deepening old Bartlesville sand wells which have been producing for the last six years.

Oklahoma Pipe Line Co. is laying a 4-inch line from Section 32-17-8, Creek County, to the new production in Section 18-16-9, Creek County. The new pipe line will run the Carter Oil Co.'s oil and part of the Selby Oil & Gas Co.'s oil from the recently discovered Dutcher sand in Section 18-16-9, Creek County.

Southern Part of State Watched

The southern part of the State is drawing attention on account of the recently completed wildcat well drilled by Wirt Franklin Petroleum Corp.'s No. 1 Spain, SW cor. SE NW, Section 9-2s-6w, Stephens County. It is the best looking wildcat completed in that part of the State in several years. It is still flowing about 500 bbls. a day from the pay sand at 3,226-38 feet. The showing of water has not affected the production and as the water has not shown any increase in the last week, many express the opinion that it will not hinder development of the surrounding area. Three new locations have been made around the well and drilling is expected to get underway in a short time. The producing horizon is deeper than has been found previously in the immediate vicinity and it will take more wells to determine what the size of the pool is.

The Amerada Petroleum Corp.'s No. 1 Delena, SE cor. NW, Section 31-4s-9w, Cotton County, is straightreaming at 2,409 feet. The owners expect to land the 8-inch casing as soon as the hole is reamed to a total depth of 3,212 feet. Some are of the opinion that the test is still in the Pennsylvanian series. Fossils supposedly of that age have been found in recent samples. However, others express the opinion that it is in the Arbuckle or Silicious lime, now that it has the base of the lime, and that it soon will be encountering the granite.

Wirt Franklin Petroleum Corp.'s No. 1 Van, SW cor. NW, Section 4-5n-9w, Caddo County, is fishing casing at 5,600 feet. The total depth of the test is 5,855 feet, in blue shale and grey sand.

Daily Pipe Line Runs

The average daily pipe line runs from the St. Louis and Asher Fields for the last week, are as follows:

Company—	Bbls.
Consolidated	5,357
Cosden	646
Gulf	4,970
Magnolia	23,342
Oklahoma	1,002
Prairie	33,234
Shell	1,820
Texas	439
Tidal	4,115
Sinclair	20,104
Total	95,029

. The daily average pipe line runs from the Seminole Field for the past week were as follows:

Company—	Bbls.
Barnsdall	4,264
Champlin	4,979
Continental	1,385
Consolidated	544
Cosden	6,507
Empire	9,273
Gulf	52,162
Independent	0
Magnolia	31,574
Oklahoma	52,627
Prairie	62,169
Producers & Refiners	1,855
Pure	5,726
Shaffer	4,341
Shell	11,753
Sinclair	32,766
Texas	16,896
Tidal	20,462
White Oak	2,291
Total	321,574
Tank cars	8,388
Grand total	329,962

Cosden Gets Good Well

J. S. Cosden, Inc., has a big producer in the Roxana Pool in Logan County. After cleaning up a fishing job which had been in progress for a month, the test was deepened and the first hour it made 180 bbls. and was increasing. This test extends the pool a half mile west and will cause new development on that side. The test is No. 1 Gardner, NE cor. NW, Section 30-19-4w, Logan County. It had the Wilcox sand at 5,952-55 feet, where it made 5,245 bbls. The gas blew the tools up the hole, causing the hole to bridge, and the production was shut off. The crew then drilled by the bridge and the test started to produce.

Shell Petroleum Corp.'s No. 6 McCully, in the NE cor. SW SE, Section 30-19-4w, was fishing for tools at a total depth of 5,941 feet, where it is making 2,507 bbls. The same company's No. 7 McCully, NE cor. SE SE, Section 30-19-4w, was drilling at 6,170 feet in sand, with a hole full of water. Its No. 8 McCully made 4,455 bbls. from a total depth of 5,975 feet. Superior Oil Corp.'s No. 1 in the SE cor. Section 25-10-5w, Logan County, had the top of the Oswego lime at 5,435 feet, and was drilling at 5,550 feet.

Osage County gets a big Wilcox sand producer on a lease that had been condemned for several years by a shallow dry hole. Galt-Brown Drilling Co.'s No. 2 in the NE cor. Section 15-24-8e, 10 miles south of Pawhuska, encountered the Wilcox sand at 2,948-50 feet, where it made 1,985 bbls. the first 24 hours. The success of this well, which is flowing by heads, is expected to cause a campaign to drill wells deeper on many leases in the vicinity, and start new work on old leases which had been condemned by shallow tests.

Hughes County

Superior Oil Corp. and Amerada Petroleum Corp.'s No. 2 Jimboy, NW cor. SE SE, Section 4-8-9, is a rig under construction. Amerada Petroleum Corp.'s No. 1 William Deere, NW cor. SW, Section 4-8-9, is dry and abandoned at 3,539 feet in Cromwell sand. Texas Pacific Coal & Oil Co.'s No. 4 Hutchens, NE cor. SW SE, Section 19-5-8, is dry and abandoned at 2,781 feet. No. 5 Hutchens, NW cor. SE SE, Section 19-5-8, has been abandoned at 2,906 feet.

McClain County

Sikes and others' No. 1 Cook, SW cor. NW NE, Section 36-6-3, is a rig going up.

Pontotoc County

American Oil & Refining Co. is erecting the rig for No. 3 Robertson, NE cor. SW, Section 19-5-5. Empire Oil & Refining Co. has the cellar dug for No. 2 Norris, SE cor. NW, Section 19-5-5. Location has been made for No. 3 Norris, NW cor. SE NW, Section 19-5-5. Independent Oil & Gas Co. has dug the cellar for No. 1 Norris, SW cor. NE NW, Section 19-5-5. Benedum & Trees' No. 1 Jacobs, NE cor. SW SW, Section 28-5-5, is a rig. Independent Oil & Gas Co.'s No. 1 L. Davis, NE cor. NW SW, Section 19-5-5, is dry and abandoned at 2,681 feet in Simpson sand.

Pottawatomie County

Magnolia Petroleum Co.'s No. 1 Mull, NE cor. SE, Section 15-7-4, Pearson area, is rigging up to deepen from 3,752 feet. Tom Slick Oil Co. and White Eagle Oil & Refining Co.'s No. 3 Latimer, SW cor. NW, Section 16-7-4, is a cellar. Commerce Development Co.'s No. 1 Asher Townsite, center of Block 67, SW cor. Section 18-6-4, is rigging up. Wortham Oil Co. has the cellar dug for No. 1 Asher Townsite, center of Block 49, NE cor. SE SW SW, Section 18-6-4. No. 1 Asher Townsite, center of Block 50, SE cor. SW SW, Section 18-6-4, is also a cellar.

The Prairie Oil & Gas Co. and T. B. Slick's No. 7 Laster, NW cor. SW NE, Section 19-6-4, is a rig under construction. Simms Oil Co. has the cellar dug for No. 1 Benham, SW cor. NE NW NW, Section 19-6-4. The rig is being built for No. 4 Laster, SE cor. NW NE, Section 19-6-4. Indian Territory Illuminating Oil Co. made location for No. 1 Philpot, NW cor. Section 4-5-5.

Phillips Petroleum Co. and Fuhrman Petroleum Co.'s No. 1 Raper, SW cor. SE, Section 33-8-5, is dry and abandoned at 4,489 feet in Wilcox sand. Independent Oil & Gas Co.'s No. 1 Borrows, SW cor. NW NW, Section 1-7-4, St. Louis Pool, drilled to 4,332 feet in Wilcox sand and plugged back to 4,320 feet where it swabbed 590 bbls. Pure Oil Co.'s No. 1 Tolen, NW cor. SW NW, Section 1-7-4, was completed for 130 bbls. at 4,147 feet after plugging back from 4,445 feet in Wilcox sand. No. 2 Tolen, SW cor. NW, Section 1-7-4, is dry and abandoned at 4,245 feet in Sylvan shale. Phillips Petroleum Co.'s No. 2 Grace, SE cor. NE, Section 2-7-4, has been abandoned at 4,430 feet in Wilcox sand.

Mgnolia Petroleum Co.'s No. 1 P. Robbins, NE cor. SE SE, Section 15-7-4, made 227 bbls. in Simpson sand at 4,217-22 feet. Independent Oil & Gas Co. and Darby Petroleum Co.'s No. 1 Pappan, NE cor. SE SE, Section 16-7-4, flowed 1,160 bbls. from Hunton lime at 3,690-4,010 feet, total depth 4,028 feet. Magnolia Petroleum Co.'s No. 3 Billington, NE cor. NW, Section 22-7-4, has been shut in for 8,500,000 feet of gas in Hunton lime at 3,625-3,755 feet. Clark & Cowden's No. 1 Townsite, center Block 1, Highland Addition, NW cor. SE, Section 18-6-4, Asher Pool, is dry and abandoned at 3,925 feet. Simms Oil Co.'s No. 3 Laster, SW cor. NE NE, Section 19-6-4, flowed 4,120 bbls. from Viola lime at 3,610-28 feet.

Seminole County

Magnolia Petroleum Co. has the rig on the ground for No. 12 A. Anderson, NE cor. SE NE, Section 18-9-6. Gypsy Oil Co. made location for No. 1 Conner, SW cor. NW SE, Section 20-7-6. The Texas Company is building the rig for No. 2 Chilcoat, NW cor. SW NW, Section 4-7-7. Pure Oil Co. moved the rig in for No. 3 Bates, SE cor. NW NE, Section 13-6-7, Sasakwa Pool. The rig is also on the ground for No. 4 Bates, NW cor. SE NE, Section 13-6-7. Skelly Oil Co. and Rogers' No. 1 Chapman, NW cor. NE SW, Section 8-6-8, is a rig being built.

Gypsy Oil Co.'s No. 1 M. Harjo, NW cor. NE NE, Section 20-10-7, is dry and abandoned at 3,963 feet in Cromwell sand. Carter Oil Co. and others' No. 1 C. Shaffer, NE cor. NW, Section 35-10-6, has been abandoned at 4,636 feet. Magnolia Petroleum Co. and Mid-Kansas Oil Co.'s No. 1 Varnum, NE cor. NW NE, Section 5-9-6, Earlsboro Pool, has been completed for 107 bbls. at 4,363 feet.

Empire Oil & Refining Co.'s No. 12 Cluck, SW cor. NE SE, Section 11-8-5, Carr City Pool, made 624 bbls. from Wilcox sand at 4,177-99 feet. Barnsdall Oil Co.'s No. 9 Coker, NW cor. SW SW, Section 11-8-5, has been completed for 385 bbls. in Wilcox sand at 4,230-36 feet. Continental Oil Co.'s No. 1 Proctor, SE cor. NE NE, Section 5-8-8, is dry and abandoned at 4,386 feet in Wilcox sand. Blackwell Oil & Gas Co.'s No. 1 Thomas, NW cor. NE SE, Section 11-7-6, Little River Pool, drilled to 3,557 feet and plugged back to 3,140 feet and made 10 bbls. Carter Oil Co.'s No. 3 L. Cudjo, SW cor. NW SE, Section 23-7-6, made 100 bbls. in Gilcrease sand at 3,090-3,139 feet.

Mid-Continent Petroleum Corp.'s No. 6 Smith, NE cor. SW NE, Section 5-7-7, has been completed for 3,995 bbls. in Wilcox sand at 4,240-68 feet. Gypsy Oil Co.'s No. 3 Payne, NW cor. SE NE, Section 5-7-7, made 3,015 bbls. from Wilcox sand at 4,209-19 feet. Carter Oil Co.'s No. 1 Davis, NE cor. SE SW, Section 7-6-8, Sasakwa Pool, is dry and abandoned at 4,249 feet in Wilcox sand. Gypsy Oil Co.'s No. 1 Peter, SE cor. NE, Section 23-5-7, swabbed 1,032 bbls. from Wilcox sand at 4,087-92 feet.

Cotton County

Baldwin & Sultan's rig is up for No. 2 Rhone, SW cor. NW SE SE, Section 35-1s-10w. Silurian Oil Co.'s No. 8 Chambers, SE cor. NE SE NW, Section 2-2s-10w, is rigging up. Bridwell and others' No. 1 Crow, SE cor. SW SW, Section 24-1s-11w, has been abandoned at 2,597 feet.

Baldwin & Sultan's No. 1 Rhone, NW cor. SE SE, Section 35-1s-10w, is pumping 60 bbls. from sand at 2,181-87 feet. Moore and others' No. 2 Cobb, NW cor. SW SW NE, Section 2-2s-10w, has been abandoned at 2,360 feet. Clifford Moore's No. 4 Chambers, NE cor. SE SE NW, Section 2-2s-10w, made a 40-bbl. well in sand at 2,168-79 feet.

Creek County

S. P. Smith & Coffee moved a machine to the location for No. 3 Maloney, C SW NW, Section 19-18-11. Alwood & Taylor's No. 1-A E. Smith, SE cor. NE SE, Section 31-18-11, is a machine. The Texas Company has a machine on the location for No. 2 Baker, SE cor. NE SE, Section 14-17-10. Hancock & Foster made location for No. 1-A Wildcat, NE cor. NW, Section 14-17-11.

Carter Oil Co. is repairing the rig to deepen No. 1 Durant, NE cor. Section 18-16-9, Bristow Field. Selby Oil & Gas Co. has the rig up for No. 7 Durant, NE cor. SE NE, Section 18-16-9. The Prairie Oil & Gas Co. is building the rig for

No. 3 Ladd, NW cor. SE, Section 18-16-9. No. 4 Irene Roberts, SW cor. Section 8-16-9, an old well, is rigging up to deepen. The rig is being built to deepen No. 3 John Roberts, SE cor. Section 7-16-9.

R. E. Perry's No. 1 Hinton, NE cor. NW SW, Section 25-19-8, has been completed for 50 bbls. in sand at 2,250-67 feet. A. A. Bailey and others' No. 1-A Williams, SE cor. NW SE, Section 30-19-8, is dry and abandoned at 3,330 feet. Gled Oil Co.'s No. 1 Gilreath, NE cor. NW SW, Section 31-19-9, has been completed for 1,000,000 feet of gas in sand at 2,481-2,551 feet. Kurell Oil Co.'s No. 1 M. Davis, NE cor. SE SE, Section 11-17-11, made a 20-bbl. well in sand at 1,194-1,208 feet.

Wilcox Oil & Gas Co.'s No. 10 Nash, NE cor. SW SW, Section 24-15-10, is dry and abandoned at 2,974 feet in Wilcox sand. The Texas Company's No. 1 Harjo, NE cor. NW, Section 35-14-9, has been abandoned at 3,666 feet in Wilcox sand. W. H. Elson and others' No. 1 Harjo, NE cor. SW SW, Section 27-14-10, is a dry hole at 3,337 feet. Billingslea and Riverland Oil Co.'s No. 1 Deere, NE cor. SW NE, Section 28-14-10, has been abandoned at 3,301 feet.

Grady County

Meridian Gas Co.'s No. 3 Short, CWL SW SE, Section 25-4-8w, is a rig.

Grant County

Argo Oil Co.'s No. 2 Howell, SE cor. Section 22-27-3w, made a 40-bbl. well after deepening from 3,988 feet to 4,000 feet.

Kay County

B. E. Holden's No. 1 Hitch, C NW SW, Section 19-28-1, is drilling at 328 feet. Parrish and others' No. 1 Quade, CSL SE SW, Section 4-27-1, has been abandoned at 710 feet.

Kiowa County

Alexander and others' No. 2 Ditmar, NE cor. SW SE, Section 18-6-16w, has been completed for 3 bbls. in sandy lime at 470-75 feet.

Le Flore County

Le Flore County Gas & Electric Co.'s No. 5 Brown, SE cor. NE, Section 9-9-27, is dry and abandoned at 3,250 feet.

Lincoln County

Flynn & Morgan made location for No. 1 Johnson, SW cor. NE, Section 1-16-5. Blackwell Oil & Gas Co. has the rig on the ground for No. 1 Harmon, SE cor. SW NW, Section 25-17-3. Shell Petroleum Corp. made location for No. 1 Furst, SW cor. SE, Section 25-17-3.

J. V. Bailey's No. 1 House, C NE SE, Section 15-16-4, is dry and abandoned at 4,631 feet. Flynn & Morgan's No. 1 Finley, SW cor. Section 19-16-6, has been abandoned at 4,220 feet.

Logan County

Shell Petroleum Corp. made location for No. 2 Storey, NE cor. SE SW, Section 30-19-4w, Roxana Pool. Location was also made for No. 11 McCully, NW cor. SW SE, Section 30-19-4w. No. 12 M. Lully, SW cor. NW SE, Section 30-19-4w, is also a location.

Muskogee County

John Aggas' No. 1-A Hawkins, CWL NW SE, Section 28-16-15, is drilling at 950 feet. H. D. Johnston and others moved a machine in for No. 1 Foreman, SE cor. SW SW, Section 14-13-18.

Jolly & Stone's No. 1 McDaniel, CSL SE SW, Section 33-16-15, is dry and abandoned at 1,892 feet.

Beckham County

Heiden and others' rig is up for No. 1 Montgomery, NE cor. NW, Section 15-9-23w.

Okfuskee County

Sunray Oil Co. made location for No. 1 Johnson, NW cor. NE, Section 30-12-9. Grimes Gasoline Co.'s No. 1-A Buck, SE cor. NW NW, Section 36-11-9, is drilling at 400 feet. Holm & Jarvis made location for No. 2 Fier, SW cor. SE SW, Section 16-10-11. W. L. Umburn and others made location for No. 1 Yarhard, NW cor. SE NW, Section 21-10-11. The Prairie Oil & Gas Co. is moving the rig in for No. 1 Fier, SE cor. SW SW, Section 16-10-11.

Ramsey Petroleum Co.'s No. 2 Severs, SE cor. NW NE, Section 36-11-9, is dry and abandoned at 3,958 feet. Sinclair Oil & Gas Co.'s No. 1 Micco, SE cor. NW SW, Section 36-11-9, has been abandoned at 3,200 feet. Champlin Oil & Refining Co.'s No. 13 Carter, Section 15-11-11, has been completed for 5 bbls. in sand at 3,483-97 feet. Producers & Refiners Corp.'s No. 4 Monarye, SW cor. SE SE, Section 29-12-10, has been shut in for 10,461,000 feet of gas in sand at 3,101-3,162 feet.

Hazlett and others' No. 1 Johnson, NE cor. SE NE, Section 3-10-11, made a 5-bbl. well in sand at 803-24 feet. W. L. Umburn's No. 2 Hill, SE cor. NW SE, Section 11-10-11, was completed for 15 bbls. in sand at 2,040-55 feet. Atlantic Oil Producing Co.'s No. 5 Robinson, NE cor. NW SW, Section 12-10-11, is a dry hole at 2,135 feet. Holm & Jarvis and others' No. 1 Buckley, NE cor. NW NW, Section 21-10-11, has been completed for 202 bbls. in sand at 2,605-14 feet.

Okmulgee County

Whitefield and others' No. 7 Grayson, SW cor. NW NE SW, Section 3-15-11, made 10 bbls. in sand at 2,235-56 feet. Sheridan Oil Co.'s No. 4 Grayson, SE cor. NE NW SW, Section 3-15-11, has been completed for 25 bbls. in sand at 2,251-57 feet. Highland Oil Co.'s No. 7 Barnett, SE cor. NE NE NW, Section 2-15-14, is dry and abandoned at 1,475 feet. Thompson & Jordan and others' No. 1 Cole, NE cor. SE SW, Section 28-15-12, is a dry hole at 2,780 feet.

Kessler Petroleum Co.'s No. 5 Colbert, C NW NW, Section 16-14-14, has been abandoned at 1,735 feet. E. M. Granfield's No. 2 Anderson, SE cor. SW SW, Section 8-14-15, has been abandoned at 2,570 feet. J. H. Rebold's No. 6 Hardridge, SW cor. SE NE, Section 27-13-14, is dry and abandoned at 2,565 feet. Red Bank Oil Co.'s No. 1-A Henry, NW cor. NE SE, Section 27-12-12, made 18 bbls. in sand at 3,391-3,427 feet. Nicholson Corp.'s No. 3 McIntosh, NE cor. Section 14-11-13, is dry and abandoned at 2,467 feet.

Osage County

Winona Oil Co. moved a machine in for No. 12, SE cor. SW SW, Section 22-29-11. Osage Gas Producers Co. has a machine on the location for No. 2, NE cor. SW SW, Section 29-28-11. Peters Petroleum Co. and Producers & Refiners Corp.'s No. 3, NE cor. NW NE, Section 27-27-11, is spudding. Transcontinental Oil Co.'s No. 1, NE cor. SE NE, Section 11-26-10, is a location.

Petroleum Drilling Co. and Oliphant made location for No. 1, NW cor. SW, Section 31-25-8. Peters Petroleum Co.'s No. 11, NW cor. NE NW, Section 26-25-9, is a cellar. The Prairie Oil & Gas Co. made location for No. 6, SE cor. SW SW, Section 30-25-8. Harland Oil Co.'s No. 86, NW cor. SW SE, Section 21-25-11, drilling at 450 feet. W. K. Cottrell and others' No. 56, SW cor. NE NW, Section 22-25-12, is drilling at 600 feet. Peters Petroleum Co. made location for No. 5, SW cor. NE SW, Section 32-24-9.

Harland Oil Co. has the rig up and tools in for No. 50, SW cor. NE NW, Section 18-24-12. A. G. Oliphant has a machine on the location for No. 1, SE cor. NW NW, Section 26-23-9. Silurian Oil Co. moved a machine to the location for No. 57, NE cor. NW NW, Section 17-23-12. Moore and others' No. 8, NW cor NE NW, Section 16-21-9, is a machine. Peters Petroleum Co. and others' No. 1, SE cor. NW, Section 28-21-11, has rigged up and shut down for water.

Osage Gas Producers' No. 1, SW cor. Section 29-28-11, made 1,250,000 feet of gas in sand at 1,824-41 feet. Peters Petroleum Co.'s No. 5, SW cor. SE SE, Section 22-27-11, made 50 bbls. in Bartlesville sand at 1,648-62 feet. Indian Territory Illuminating Oil Co.'s No. 407, NE cor. SW SE, Section 18-25-12, is dry and abandoned at 2,040 feet. Kay County Gas Co.'s No. 7-B, NW cor. SW NE, Section 22-24-7, made 12,250,000 feet of gas from Bartlesville sand at 2,396-2,462 feet.

Galt Brown Oil Co.'s No. 6, CNL S half N half NW, Section 7-24-8, made 15 bbls. in Skinner sand at 2,327-46 feet. W. D. Gray and others' No. 4, SW cor. SE SE, Section 34-24-8, has been completed for 530 bbls. in Wilcox sand at 2,564-67 feet. Peters Petroleum Co.'s No. 4, NW cor. NE SW, Section 32-24-9, was completed for 10 bbls. in Bartlesville sand at 2,152-2,212 feet. Wrightsman Petroleum Corp.'s No. 1, NE cor. SW, Section 32-22-8, had sand at 2,295-2,301 feet and plugged back to 2,130 feet and made 17 bbls. Peters Petroleum Co. and others' No. 1, NE cor. SW, Section 31-22-9, is dry and abandoned at 2,577 feet. Braden & Moore's No. 7, CEL NE SE NW, Section 12-21-8, is dry and abandoned at 658 feet.

Pawnee County

J. L. Donahue's No. 1-A Cary, SW cor. NE SW, Section 22-23-4, is spudding. Peerless Oil Co. and Carter Oil Co.'s No. 1 Rigby, C SE SE, Section 17-20-9, is drilling at 250 feet. C. C. Chamberlin's No. 1 Coats, SE cor. NE, Section 27-20-9, is a machine. Sears and others moved a machine in for No. 4 Wiggs, CSL NE NW, Section 35-20-9. E. R. Spees and others' No. 1 Miller, NW cor. NE SE, Section 20-20-10, is drilling at 250 feet.

Peter Adamson's No. 4 Parker, NE cor. SW SE, Section 24-21-7, is dry and abandoned at 2,850 feet. Johnson Oil & Refining Co.'s No. 1-A Scully, NE cor. NW NE, Section 25-21-7, made 310 bbls. from Siliceous lime at 2,650-2,739 feet. Bartless and others' No. 1-B Martin, NE cor. SE SE, Section 15-20-9, has been completed for 1,000,000 feet of gas in sand at 925-35 feet. Slanagan & Johnson's No. 1 Keystone Townsite, Lot 67, Block 73, CNL NW SE, Section 25-20-9, has been deepened to Wilcox sand at 2,436-46 feet and is pumping 4 bbls.

Jackson and others' No. 7 Johnson, NE cor. SW NW, Section 25-20-9, made 5 bbls. in Bartlesville sand at 2,015-52 feet. McMan and others' No. 1 Johnson, CWL SE SE, Section 27-20-9, has been completed for 1,000,000 feet of gas in Skinner sand at 1,888-95 feet. Union Oil & Mining Co.'s No. 1 Price, NE cor. SW NE, Section 17-20-10, is dry and abandoned at 2,300 feet.

Stephens County

Ellis Drilling Co.'s No. 6 Nigh, NE cor. SE SW NW, Section 34-1s-8w, is drilling at 150 feet. Lone Eagle Oil Co.'s No. 9 Simpson, SE cor. NE SE, Section 34-1s-8w, is rigging up. Murphy Oil Co. made location for No. 17 Fobb "B," SE cor. NW SW, Section 12-2s-8w. Magnolia Petroleum Co.'s No. 7 Peck, NE cor. SW SE NE, Section 13-2s-8w, is cementing surface pipe. Pace and others' No. 1 Bunch, SW cor. NW SE, Section 21-2s-7w, is installing a machine at 1,732 feet.

No. 1 Enloe, NW cor. SW SE, Section 21-2s-7w, is rigging up. E. Parsons made location for No. 1 Dilly, SW cor. SE SW, Section 22-2s-7w. Wirt Franklin Oil Corp. made location for No. 1 Brookes, SE cor. NE, Section 8-2s-6w. Location has also been made for No. 1 Green, NW cor. SW NW, Section 9-2s-6w. No. 1 Bonner, NW cor. SE, Section 9-2s-6w, is also a location. Magnolia Petroleum Co. is building the rig for No. 1 Martin, SW cor. Section 21-2s-4w.

Ellis Drilling Co.'s No. 4 Ketchem, SE cor. NE NW NW, Section 25-1-9w, made a 10-bbl. well in sand at 2,066-72 feet. Winkler & McQueen's No. 6 Springer, SE cor. NW SE NW, Section 28-1s-8w, has been completed for 25 bbls. in sand at 1,674-96 feet. American Pipe Line Co.'s No. 7 Dexter, NE cor. SE SE NW, Section 34-1s-8w, made a 5,000,000-foot gas well in sand at 1,862-66 feet. Ellis Drilling Co.'s No. 5 Nigh, SE cor. SW NW, Section 34-1s-8w, has been completed for 8,500,000 feet of gas in sand at 1,842-46 feet.

Roy Carter's No. 7 Simpson, NW cor. SE SE, Section 34-1s-8w, is pumping 6 bbls. in sand at 1,820-27 feet. Magnolia Petroleum Co.'s No. 24 Kagay, SW cor. SE SW, Section 34-1s-8w, has been abandoned at 2,465 feet. Pace and others' No. 1 Bristowe, NE cor. SE, Section 29-2s-7w, is dry and abandoned at 1,947 feet. Wirt Franklin Petroleum Corp.'s No. 1 Spain, SW cor. SE NW, Section 9-2s-6w, made 616 bbls. in sand at 3,226-38 feet.

Murphy Oil Co.'s No. 16 Fobb "B," SW cor. SE NW SW, Section 12-2s-8w, has been completed for 12 bbls. in sand at 1,512-25 feet. Magnolia Petroleum Co.'s No. 5 Peck, NE cor. SE SE NE, Section 13-2s-8w, is pumping 5 bbls. in sand at 1,476-84 feet. No. 6 Peck, SE cor. NE, Section 13-2s-8w, made 65 bbls. in sand at 1,484-88 feet. Pace and others' No. 7 McMasters, NW cor. SE NE, Section 13-2s-8, is pumping 25 bbls. from 1,440 feet after plugging back from 1,842 feet.

Tulsa County

The Prairie Oil & Gas Co. made location for No. 3 Lewis tank farm, C NE SE, Section 34-17-12. Byrne & Green's No. 1 Flippen, NE cor. NW SE, Section

RECAPITULATION SHEET JULY 25, 1929

Company—	Little River	Carr	Maud	Mission	Bowlegs	Earlsboro	Seminole	East Seminole	Searight	Total
Amerada	1,030	....	2,625	960	765	1,033	962	....	344	7,619
Atlantic	....	....	....	....	744	110	365	....	....	1,219
Barnsdall	1,755	2,046	....	....	332	5,594	1,078	20	29	10854
Blackwell	1,950	....	....	....	....	....	....	....	....	1,950
Bryan-Emery & Carter	13	....	....	....	....	....	....	....	....	13
Burke-Greis	....	....	....	....	....	1,925	....	....	....	1,925
Carter	9,890	2,420	....	1,820	3,532	3,040	7,501	....	4,249	32,452
Champlin	829	....	....	....	....	....	....	....	....	829
Continental	1,636	....	56	1,063	....	642	....	2,240	....	5,637
Cosden & Co.	....	....	....	....	....	2,707	....	....	....	2,707
Darby	....	....	....	75	....	....	....	....	....	75
Devonian	....	....	....	....	....	....	....	12	....	12
Dixie	....	....	....	....	40	....	....	....	....	40
Empire	670	4,741	2,148	....	428	1,384	340	....	....	9,711
Gypsy	9,858	1,194	564	10,511	1,865	12,179	2,554	260	802	39,787
Independent	5,979	....	225	1,952	....	1,564	1,969	....	....	11,689
I .T. I. O.	2,898	....	65	....	8,174	....	2,381	....	....	13,518
King-Shell	....	....	....	....	....	....	396	....	....	396
Laurel	....	....	260	....	....	....	....	....	....	260
Magnolia	902	833	325	....	1,597	24,792	214	47	448	29,158
McCullough	....	....	....	....	87	....	....	....	....	87
McMahon	....	....	....	813	....	....	....	....	....	813
Mid-Continent	14,920	....	50	75	421	3,275	675	....	1,605	21,021
Mid-Kansas	....	....	....	....	....	35	....	....	....	35
Minnehoma	....	....	....	646	56	....	....	....	....	702
Papoose	....	....	....	....	....	....	....	....	405	405
Phillips	....	....	298	....	....	530	90	....	....	918
Pure	4,191	....	1,624	....	4,900	....	5,195	....	785	16,605
Pine-Phillips	65	....	....	....	....	....	....	....	....	65
Prairie	2,142	2,105	168	2,377	4,660	9,575	4,486	15	83	30.611
Prairie-Slick	1,485	....	....	55	....	....	....	....	....	1.540
Pure	4,191	....	1,624	....	4,900	....	5,195	....	785	16,695
Reiter-Foster	528	....	....	....	....	....	....	....	....	528
Shaffer	47	....	....	1,215	450	102	....	15	....	1,829
Shell	2,299	....	....	....	34	1,441	232	....	178	4,184
Shell-Marland	....	....	....	1,130	....	....	....	....	....	1.130
Shell-Papoose	....	....	....	1,276	....	....	....	....	....	1,276
Sinclair	4,272	980	930	1,161	4,271	2,920	2,199	2,809	1,425	20,967
Skelly	1,580	....	145	....	....	2,273	....	....	....	3,998
Skelly-Atlantic	....	....	....	....	....	1,810	....	....	....	1,810
Snowden-McSweeney	240	....	....	....	....	....	....	....	....	240
Superior	3	....	....	....	....	2,272	99	....	31	2,405
Texas	1,150	....	245	....	700	1,495	60	....	17	3,667
Texas-Indep.	1,892	....	....	....	....	....	....	....	....	1,892
Tidal	380	....	255	1,852	1,205	3,330	1,681	....	....	8,703
Turman	....	....	....	....	....	....	1,651	....	....	1,651
Twin State	60	....	105	2,545	....	65	....	....	125	2,900
Wilcox	....	....	1,685	....	....	....	....	....	201	1,886
Total prod.	79,229	14,319	12,014	30,196	34,261	84,093	34,128	5,418	10,742	304,400
Total wells	353	51	124	115	300	307	273	13	81	1,622

28-18-14, is making 2,500,000 feet of gas from sand at 1,386-1,416 feet. No. 2 Flippen, NW cor. NE SE, Section 28-18-14, has been completed for 1,750,000 feet of gas in sand at 1,448-68 feet.

Wagoner County

Fred Loesing's No. 1-A Montooth, NW cor. SW NE, Section 16-18-16, is drilling at 115 feet. Mid-Co Oil Co.'s No. 2 Drew, SE cor. SW, Section 15-18-17, has been completed for 1,000,000 feet of gas in sand at 810-25 feet. H. D. McCracken's No. 8 Childers, CSL NE NW, Section 21-18-17, is dry and abandoned at 891 feet. C. F. Finefield's No. 1-A Willis, NW cor. NE NE SW, Section 34-18-17, is dry and abandoned at 873 feet.

Earlsboro Pool

Company, farm—	Location	Wells	Prod.
Amerada:			
Anderson	15-9-5	1	245
Cowden	4-9-5	7	717
Rogers	3-9-5	2	71
Atlantic & Sinclair:			
Foreman	18-9-5	1	110
Barnsdall:			
Brown	10-9-5	3	910
Bruner, F.	2-9-5	2	133
Bruner, N.	10-9-5	1	189
Cudjo	14-9-5	1	23
Davis, D.	11-9-5	3	162
Davis, J.	11-9-5	4	777
Davis, M.	11-9-5	2	42
Gibson	9-9-5	7	911
Hern	15-9-5	1	...
Ingram	1-9-5	6	276
Pack, S.	10-9-5	4	85
Peter	10-9-5	3	76
Sango	1-9-5	2	1,509
Sebalka	15-9-5	1	143
Sullivan, H.	11-9-5	1	3
Sull-Harjo	10-9-5	2	15
Wasutke	12-9-5	3	340
Burke-Greis:			
Wisner	6-9-6	2	175
Burke-Greis & Red Bank:			
Mays	1-9-5	3	1,750
Carter:			
Davis	13-9-5	3	70
James	6-9-6	3	1,615
Carter et al:			
Gilliam	13-9-5	2	1,355
Continental:			
Kays	2-9-5	2	30
Spencer	12-9-5	4	612
Cosden, J. S., Inc.:			
Anderson	13-9-5	1	2,707
Sarber	13-9-5	1	...
Empire:			
Barker	12-9-5	1	45
Edmondson	3-9-5	2	25
Empire & Amerada:			
Bullock	8-9-5	2	967
Empire & Marland:			
Anderson	13-9-5	2	347
Gypsy:			
Bruner	10-9-5	4	1,512
Carter, B.	11-9-5	7	1,740
Earl	16-9-5	1	8
Hunick	5-9-5	2	1,520
Lottie	31-10-6	1	...
No'le	12-9-5	4	632
Payne	18-9-6	1	4,470
Peter	10-9-5	1	97
Sango	1-9-5	13	1,975
State	16-9-5	3	225
Independent:			
Bruner	10-9-5	3	187
Sullivan	10-9-5	1	12
Knapp	8-9-5	2	1,235
Indep.-Margay:			
Gains	11-9-5	3	130
Magnolia:			
Anderson, A.	18-9-6	4	15,462
Anderson, D. W.	18-9-6	2	5,771
Bryant	9-9-5	6	21
Cowden	4-9-5	1	22
Dixon	12-9-5	1	12
Edmondson	3-9-5	1	4
Germany	30-9-5	1	12
Gilliam	13-9-5	3	2,174
Holmsley	11-9-5	6	7
Hyde	13-9-5	2	...
Ingram	10-9-5	1	15
Lena	10-9-5	3	34
Moore	24-9-5	1	829
Seay	12-9-5	9	154
Simpson	10-9-5	4	233
Sparks	11-9-5	6	...
Sullivan	12-9-5	3	42
Mid-Continent:			
McCumber	9-9-5	4	45
Rogers	5-9-5	4	3,230
Mid-Kansas:			
Anderson	14-9-5	1	35
Phillips:			
Dunaway	14-9-5	1	20
Reade	8-9-5	1	510
Prairie:			
Baker	24-9-5	4	900
Davis	13-9-5	3	405
Graham, C.	2-9-5	1	...
Graham, O.	10-9-5	4	820
James	6-9-6	1	...
Reitman	18-9-6	1	3,630
Stidham	11-9-5	9	735
Prairie & Skelly:			
Campbell	6-9-6	7	3,070
Prairie & Whitney:			
Harjo	24-9-5	1	15
Shaffer:			
Clark	1-9-5	2	102
Shell:			
Bayless	17-9-5	1	10
Hearn	13-9-5	1	15
Spencer	12-9-5	2	1,416
Sinclair:			
Alexander	36-10-5	1	765
Foreman	18-9-5	1	15
Hollins	12-9-5	1	20
Miller	24-9-5	1	815
Sango	2-9-5	4	1,305
Skelly:			
Mays	1-9-5	4	592
Shepard	6-9-6	4	1,500
Spencer	12-9-5	1	181
Skelly & Atlantic:			
Cherry	6-9-6	4	343
Lottie	6-9-6	4	1,300
Varnum	5-9-6	1	167
Superior:			
Ingram	1-9-5	3	1,072
Walker	2-9-5	2	1,200
Texas:			
Anderson	2-9-5	3	115
Brown	10-9-5	8	105
James	6-9-6	3	185
Rogers	5-9-5	5	1,010
Wilmott	10-9-5	6	80
Tidal:			
Walker	35-10-5	2	1,420
Watkins	9-9-5	7	1,910
Twin States:			
Barker	12-9-5	3	35
Hern	2-9-5	2	30
Total		307	84,093

Seminole Pool

Company, farm—	Location	Wells	Prod.
Amerada:			
Fixico	23-9-6	2	95
Killingsworth	23-9-6	4	535
Rentie	23-9-6	3	332
Atlantic:			
Cudjo, N.	35-9-6	3	365
Barnsdall:			
Carter	24-9-6	5	186
Henry	14-9-6	2	402
Jones	34-9-6	4	490
Carter Oil:			
B. Carter	24-9-6	2	40
F. Carter	23-9-6	2	100
Creamer	34-9-6	1	7
Cudjo, R.	35-9-6	4	185
Cudjo, W.	34-9-6	1	110
Gilliland	27-9-6	1	160
Grisso	23-9-6	4	210
Grisso, M.	15-9-6	1	220
Killings, G. F.	14-9-6	4	40
Killings, M. E	23-9-6	12	4,435
Knapp	13-9-6	1	32
Lukes	27-9-6	5	1,020
Pounder	34-9-6	2	175
Simpson	35-9-6	2	127
Strothers	34-9-6	4	365
Vierson	23-9-6	1	20
Sanford	16-9-6	1	255
Empire:			
Gross	25-9-6	1	35
Wilson	34-9-6	2	305
Gypsy:			
Butler	35-9-6	4	855
Carter	24-9-6	8	650
Cudjo	34-9-6	4	342
Fixico	26-9-6	7	50
Harjo	25-9-6	3	263
Wolfe	26-9-6	5	394
Independent:			
Fixico, P.	23-9-6	3	475
Harjo	25-9-6	2	40
Butler	35-9-6	3	800
Fixico, T.	26-9-6	5	254
Jones	26-9-6	4	400
I. T. I. O.:			
Allen	25-9-6	2	27
Bowlegs, L.	26-9-6	12	2,007
Goodin	23-9-6	4	277
Harjo	23-9-6	3	40
James	24-9-6	2	22
Reed	24-9-6	1	8
Kingwood:			
Johnson	22-9-6	3	396
Magnolia:			
Boren	2-8-6	1	3
Franks	25-9-6	3	211
Mid-Continent:			
Rentie	14-9-6	9	520
Tayeche	24-9-6	7	155
Phillips:			
Strothers	27-9-6	2	90
Prairie:			
Cudjo	35-9-6	3	330
Franks	35-9-6	6	880
Giblet	35-9-6	3	1,270
Gross	25-9-6	5	35
Mason	36-9-6	1	55
Spencer	13-9-6	1	6
Strothers	27-9-6	8	1,875
Tiger	1-8-6	1	35
Pure Oil:			
Strothers	26-9-6	17	4,032
Strothers, B.	36-9-6	4	812
Strothers, C.	34-9-6	1	351
Shell:			
Harber	32-9-6	1	198
Lasley	22-9-6	2	34
Sinclair:			
Carter	13-9-6	2	22
Cudjo "A"	35-9-6	6	595
Cudjo "B"	35-9-6	4	562
Dicey	22-9-6	2	540
Fixico	23-9-6	4	480
Superior:			
Cudjo	35-9-6	4	98
Noble	15-9-6	1	1
Texas:			
Mayhue	14-9-6	1	5
Strothers	2-9-6	1	55
Tidal:			
Carter	24-9-6	4	99
Fixico	26-9-6	7	1,521
Harjo	25-9-6	1	16
Harjo, T.	23-9-6	3	45
Turman:			
Cudjo	35-9-6	4	615
Grisso	35-9-6	1	...
Jones	34-9-6	4	1,036
Total		273	34,128

Maud Pool

Company, farm—	Location	Wells	Prod.
Amerada:			
Ballard	1-8-4	1	65
Fehl'g	7-8-5	1	60
Gossland	8-8-5	3	170
Gravel	1-8-4	1	15
Hallum	1-8-4	4	1,765
Amerada & Barnsdall:			
Wallace	17-8-5	4	300
Amerada & Hull:			
Green	20-8-5	3	150
Continental-Shell:			
Everetts	18-8-5	2	56
Darby:			
Ketcham	19-8-5	1	...
Empire:			
Smith	8-8-5	2	2,148
Gypsy:			
Bourassa	7-8-5	4	72
Miller	18-8-5	8	492
Independent:			
Harding	18-8-5	5	225
I. T. I. O.:			
State	16-8-5	1	65
Laurel O. & G.:			
Billington	18-8-5	3	260
Magnolia:			
Billington	8-8-5	4	76
Green	20-8-5	3	249
Mid-Continent:			
Shelton	18-8-5	3	50
Phillips:			
Hudson	19-8-5	4	208
Wallace	17-8-5	2	90
Pine:			
Lingefelt	18-8-5	2	56
Smith	8-8-5	1	285
Prairie:			
Campbell	18-8-5	8	155
Prairie & White Eagle:			
Villines	20-8-5	1	13
Pure:			
Lindly	18-8-5	8	310
Urbansky	19-8-5	2	71
Wiley	8-8-5	4	1,243
Sinclair:			
Bellars	19-8-5	10	640
Calvin	7-8-5	3	220
Lewis	6-8-5	2	70
Skelly & Lenox:			
Green	20-8-5	1	...
Skelly & Margay:			
Lingefelt	18-8-5	4	145
Texas:			
Calvin	7-8-5	8	245
Tidal:			
Dunn	12-8-4	1	40
Everett	18-8-5	2	80
Smith	8-8-5	1	135
Twin State:			
Calvin	7-8-5	2	105
Wilcox:			
Smith	8-8-5	4	1,685
Total		124	12,014

Mission Pool

Company, farm—	Location	Wells	Prod.
Amerada:			
Rice	5-8-6	2	960
Carter:			
Fuswa	18-8-6	4	620
Micco	8-8-6	2	645
Melisse	9-8-6	1	555
Continental:			
Mains	7-8-6	4	1,063
Darby:			
Judy	1-8-5	1	75
Gypsy:			
Baby	6-8-6	1	17
Barkus, N.	6-8-6	10	5,505
Barkus, S.	7-8-6	1	120
Dosar	7-8-6	5	1,147
Hardy	7-8-6	7	400
Harjoche	7-8-6	4	120
Micco, L.	8-8-6	2	45
Micco, S.	8-8-6	1	...
Mission	5&6-8-6	7	2,067
Mosar	1-8-5	4	1,090
Independent:			
Lawson	1-8-5	5	1,030
Indep. & Kistler:			
Payne	7-8-6	4	922
McMahon et al:			
Harjo	7-8-6	2	813
Mid-Continent:			
Ripley	13-8-5	1	75
Mid-Kansas:			
Moore	7-8-6	1	...
Minnehoma:			
Neal	7-8-6	4	646
Pine:			
Harjo	6-8-6	2	670
Micco	8-8-6	1	...
Prairie:			
Crain	7-8-6	1	207
Melton	6-8-6	3	1,285
Micco	5-8-6	1	10
Townsend	6-8-6	1	440
Prairie & Slick:			
Nelly	12-8-5	1	55
Prairie & Gypsy:			
Owens	18-8-6	2	435
Shaffer:			
Weaver	12-8-5	3	1,215
Shell & Continental:			
Herndon	7-8-6	3	1,130
Shell & Papoose:			
Maines	7-8-6	8	1,276
Sinclair:			
Hardy	7-8-6	4	1,103
Sinclair & Lenox:			
Judy	1-8-5	1	58
Tidal:			
Nelly	12-8-5	5	1,852
Twin State:			
Hayes	8-8-6	2	1,395
Judy	6-8-6	2	925
Ripley	12-8-5	2	225
Total		115	30,196

Bowlegs Pool

Company, farm—	Location	Wells	Prod.
Amerada:			
Roscoe	15-8-6	6	765
Atlantic:			
Baker	10-8-6	4	237
Fleet	23-8-6	3	50
Grayson	13-8-6	4	397
Jones, A.	16-8-6	2	25
Jones, C.	9-8-6	1	35
Barnsdall:			
McNac	28-8-6	1	22
Murrow	11-8-6	4	310
Carter Oil:			
Bowlegs	15-8-6	4	380
Burden	23-8-6	2	230
Harjoche	14-8-6	6	400
Hilly	23-8-6	3	240
Jones	11-8-6	4	472
Walker	15-8-6	4	355
Wise	23-8-6	11	1,455
Dixie:			
Culley	11-8-6	1	40
Empire:			
Lacy	14-8-6	6	270
Wise	23-8-6	2	158
Gypsy:			
Bowlegs	22-8-6	1	3
Cumsey	10-8-6	4	590
Garyson	13-8-6	4	247
Harjoche	10-8-6	3	303
Jones	11-8-6	1	60
Walker	15-8-6	7	542
Wise	23-8-6	2	120
I. T. I. O.:			
Barnett	24-8-6	3	43
Barnett "B"	23-8-6	1	31
Billington	22-8-6	3	312
Bowlegs	22-8-6	9	1,300
Davis	13-8-6	4	97
Fay	13-8-6	9	850
Goforth	15-8-6	12	1,474
Livingston	15-8-6	10	1,587
Lizzie	13-8-6	3	414
Walker	15-8-6	8	1,342
Williams	12-8-6	1	123
Wilmott	15-8-6	4	484
Work	24-8-6	1	58
Youngblood	24-8-6	2	69
Magnolia:			
Davis	13-8-6	3	352
Davis, M.	13-8-6	1	...
Hammond	10-8-6	3	530
Rhodos	12-8-6	5	332
Van Buskirk	9-8-6	4	383
McCulloch:			
Bowlegs	22-8-6	1	87
Mid-Continent:			
Baker	10-8-6	4	161
Smith	12-8-6	6	260
Minnehoma:			
Bowlegs	15-8-6	3	56
Prairie:			
Gahagan	23-8-6	3	235
Harber	10-8-6	8	1,545
Jones, G.	11-8-6	3	320
Jones, N.	3-8-6	1	220
Templeton	12-8-6	4	1,960
Whitney	23-8-6	4	380
Pure Oil:			
Reed	14-8-6	14	2,583
Strother "D"	11&14-8-6	4	372
Strother "F"	10-8-6	7	1,945
Shaffer:			
Lacy	14-8-6	3	450
Shell:			
Taylor	16-8-6	5	34
Sinclair:			
Cumsey	10-8-6	4	840
Ellen	11-8-6	5	576
Harjo	14-8-6	3	650
Jones	9-8-6	7	360
Taylor	10-8-6	4	665
Taylor, W.	10-8-6	3	503
Walker	22-8-6	4	677
Texas:			
Reed	14-8-6	11	700
Tidal:			
Grayson	13-8-6	4	445
Harjoche	10-8-6	6	760
Total		300	34,261

PRODUCTION OF SEMINOLE AREA

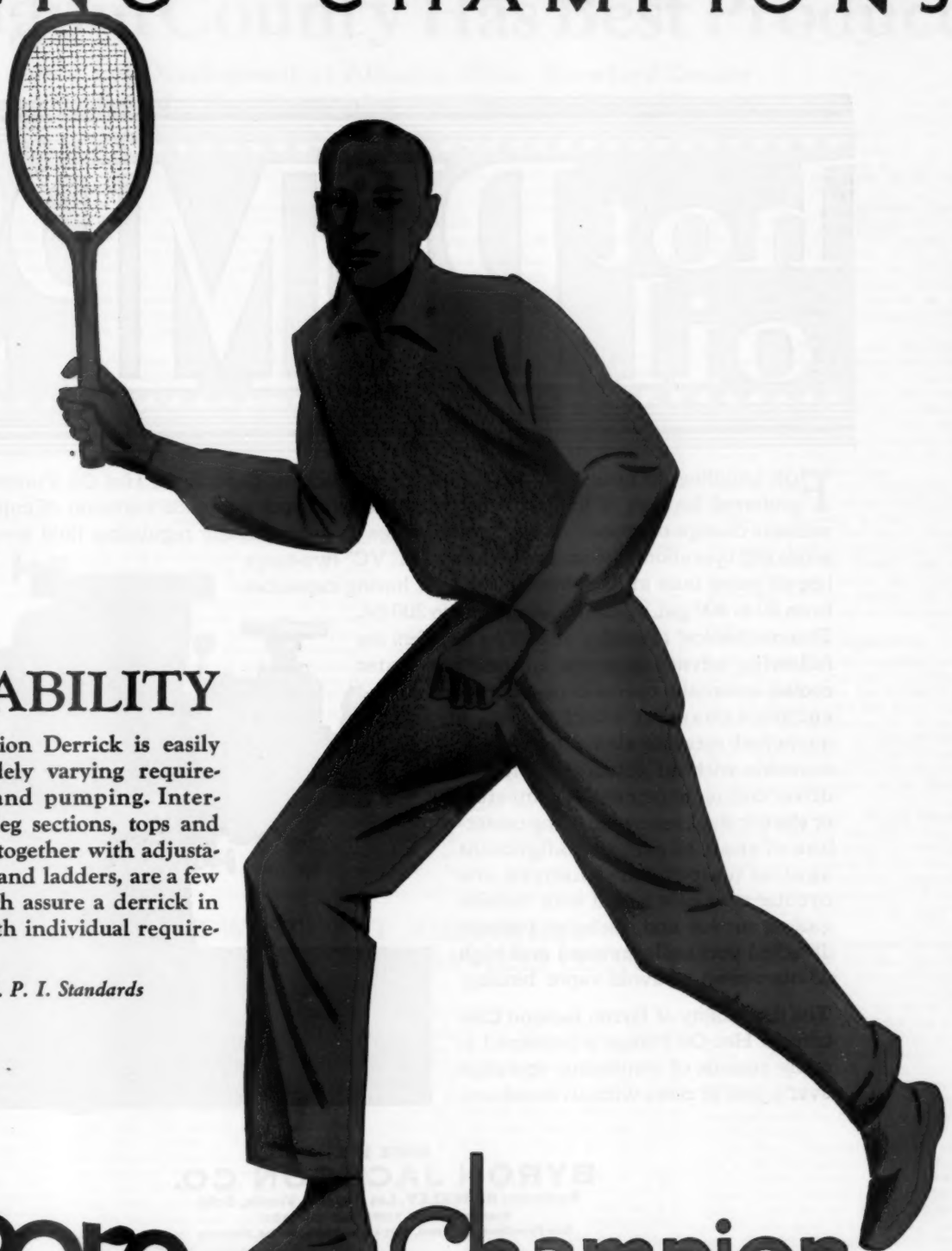
Production of pools in the Seminole area by companies and leases for July 25 follows:

Little River Pool

Company, farm —	Location	Wells	Prod.
Amerada:			
Hotulke	22-7-6	1	35
Nitey	2-7-6	3	330
Amerada-Wilcox:			
Fore	35-8-6	2	665
Barnsdall:			
Cotcha	23-7-6	3	330
Hotulke	22-7-6	3	910
Walker	4-7-6	1	15
Blackwell:			
Baker	11-7-6	4	1,030
Nitey	35-8-6	5	245
Talley	14-7-6	4	670
Thomas	11-7-6	1	5
Bryan & Emery:			
Walker	4-7-6	1	13
Carter:			
Cotcha, M.	23-7-6	3	80
Cudjo, L.	23-7-6	2	440
Fish	36-8-6	4	545
Harjo, C.	11-7-6	3	2,400
Harjo, M.	13-7-6	4	510
Jackson	11-7-6	4	725
Larney, B.	26-7-6	2	520
Larney, J.	24-7-6	4	1,795
Lena	10-7-6	1	400
Moore	11-7-6	2	35
Tewee	14-7-6	6	885
Thomas	11-7-6	1	390
Walker, J.	24-7-6	1	960
Wilson	12-7-6	1	205
Champlin:			
Tewee	14-7-6	2	329
Continental:			
Cesar	36-8-6	7	850
Cesar, M.	26-8-6	1	305
Continental & Fisher:			
Milsey	11-7-6	2	287
Continental & Steffen:			
Harrison	4-7-7	2	194
Empire:			
Charty	24-7-6	1	71
Coker	13-7-6	2	545
Cotchie	27-7-6	2	42
Sandlin	3-7-6	1	12
Gypsy:			
Brown, C.	33-8-6	2	220
Brown, M.	33-8-6	1	810
Campbell	33-7-6	1	15
Conard	22-7-6	2	150
Cosar, W.	36-8-6	2	205

(Continued on Page 139)

AMONG CHAMPIONS



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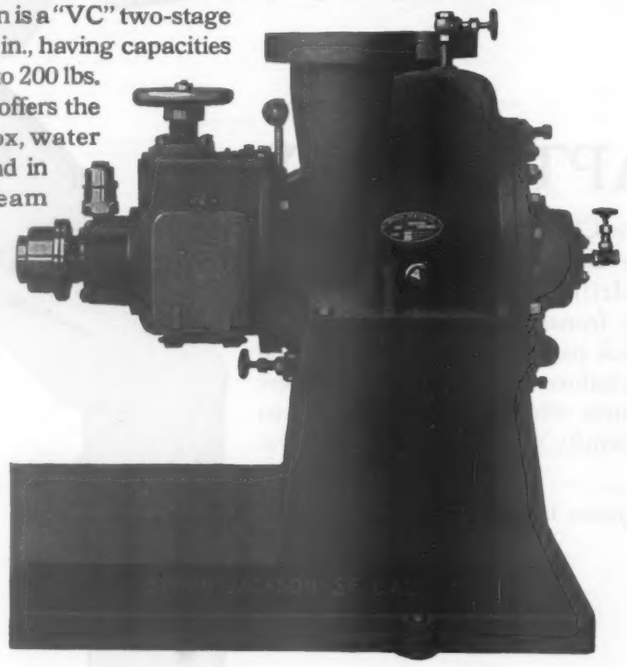

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CENTRIFUGAL PUMPS FOR EVERY SERVICE

Muskingum County Has Best Producer

Town Lot Development at Alliance, Ohio. Crawford County to Be Tested. Gas Companies Are Busy in West Virginia

By D. S. Wakenight
Staff Correspondent, Eastern Fields

PITTSBURGH, Pa., July 29.—The deep sand territory in Muskingum County, Ohio, is credited with the best producer of the week. Located in the northeast quarter of Section 4, Jackson Township, Muskingum County, the Pure Oil Co. completed and shot in the Clinton sand No. 7 on the Joab Ashcraft farm. It produced 175 bbls. the first 24 hours. In the northeast quarter of Section 5, Harrison Township, Perry County, the same company completed in the same formation No. 3 on the Julia D. Turner farm. It produced 48 bbls. the first 24 hours.

SOUTHEAST OHIO

In Section 15, Perry Township, Muskingum County, the Wittmer Oil & Gas Properties completed a 9 bbl. pumper in the Clinton sand on the James Moore farm. In Section 16, Washington Township, Jewell & Co. completed a fair gasser in the Clinton sand on the Z. L. Watson farm.

One-half mile west of the Ohio River, in Section 28, Newport Township, Washington County, Zwingle Brothers completed in the Peeker sand a 2 bbl. pumper on the Preston Hays heirs' farm. In the same section Frank Haus & Co. completed in the Maxon sand a second test on the Frank Hays farm. It is the same kind of a pumper. On Elk Run, Section 29, Independence Township, Harry Binegar completed in the Big Injun sand a small pumper on the Schemel Cembach heirs' farm.

In the northwest quarter of Section 20, Sutton Township, Meigs County, Simon Lebow & Co. completed in the Berea grit No. 3 on the Elizabeth Krauter farm, as a 6 bbl. pumper. In Section 30, Salisbury Township, Frank Leighfeit completed a light gasser in the Berea grit on the C. J. Gunther farm. In the northeast quarter of Section 17, Sutton Township, R. C. Miller & Co. completed No. 4 on the W. B. Cross farm, a duster in the Cow Run sand. In Lot 283, Sutton Township, the Southern Petroleum Co. has started to drill a second test on the Robert Crew farm.

Athens County

In York Township, Athens County, Campbell & Berlin have a gasser in the Berea grit on the Nelsonville Coal Co.'s farm. In Coal Township, Perry County, the Hope Construction & Refining Co. has a gasser in the Clinton sand at No. 3 on the Ackers heirs' farm. In Clayton township, the Wherle Co. has started to drill on the L. E. Wright farm. In Jackson Township, J. Elder & Co. are drilling on the D. A. Clark farm.

At Bolin Mills, Section 3, Knox Township, Vinton County, W. J. Sperry, trustee, has completed a second test on the Harvey Brooks farm, a 4 bbl. pumper in the Berea grit. In the southwest quarter of Section 12, Reading Township, Perry County, the Preston Oil Co.'s No. 3 on the Charles W. Spohn farm, is a duster in the Clinton sand.

In Section 18, Franklin Township, Monroe County, the Perry Oil Co. and others completed in the Berea grit a duster on the W. W. Draper farm. In Section 9, the Preston Oil Co. has a duster in the Berea grit on the S. C. Stalling farm. In Section 34, Bethel Township, Henry Mercher has a light pumper in the Keener sand at No. 14 on his own farm.

Jefferson County

In the southeast quarter of Section 13, Knox Township, Jefferson County, George Clurt & Co. completed in the Berea grit No. 3 on the M. M. Cooper farm, as a very light pumper. In the southwest quarter of Section 1, Island Creek Township, James Davis completed in the same formation a test on the John Moreland farm, not good for more than a fraction of a barrel. In Section 20, Knox Township, Harry E. Tope & Co. completed No. 7 on the W. W. Edmiston farm, not good for more than 1 bbl. a day.

In Section 5, Knox Township, Columbiana County, Pittsburgh parties have completed a duster in the Berea grit on the John Buehler farm. In Sutton Township, Meigs County, the Twenty-Five Associated Producers, Inc., has started to drill No. 12 on the William Carnahan farm. In the same township, S. A. Palmer has started to drill on August A. Circle farm.

Starting Tests

There is more test work starting and under way in southeast Ohio than at any time since the first of the year. It now seems that Alliance, Stark County, is to have a town lot development. Five wells have been completed, and two rigs up. Across the dividing line in Knox Township, Columbiana County, Pittsburgh parties are drilling on the John Bacheler farm, and George Kiel is drilling on the John Anderson farm. In Bearfield Township, Perry County, Clyde Foraker is rigging up on the John Lucas farm. In Coal Township, the Hope Construction & Refining Co. has started to drill on the James J. Tracey estate and Eli M. West farm. In Lee Township, Athens County, the Three Way Oil Co. is drilling on the Emma Marcun farm. In Athens Township, Young and others have started to drill on the F. P. White farm. In Alexander Township, Jones and others have started to drill on the M. Vorhees farm. In Lee Township, the Ohio Fuel Supply Co. has started to drill on the C. W. Winget farm.

Crawford County to Be Tested

It is reported that Pittsburgh parties are going to try for production in the northern part of Crawford County. Within the past few weeks 15 leases on farms in Chatfield and part of Liberty Townships have been recorded. The leases cover 15,000 acres in these two townships, and test wells will be started as soon as the drilling material can be assembled. The first test will be drilled on the Catherine Walther farm, near Ridgeton.

In the northwest quarter of Section 13, Washington Township, Hocking County, the Preston Oil Co. completed and shot in the Clinton sand No. 5 on the W. W. Marks farm. It produced 5 bbls. the first 24 hours. In York Township, Section 19, Athens County, Campbell & Co. have a gasser in the Berea grit good for 1,000,000 feet.

Perry County

In the southwest quarter of Section 25, Coal Township, the Hope Construction & Refining Co. completed in the Clinton sand No. 3 on the Alers farm. It is a gasser good for 1,000,000 feet. In the southeast quarter of Section 19, Harrison Township, the Ohio Fuel Gas Co. has a gasser in the same formation good for 250,000 feet.

In Section 17, Lawrence Township, Washington County, the J. B. Braden Oil Co. and others completed No. 5 on the Florence Reed farm, dry in the second Cow Run sand. In Section 31, Madison Township, Noble County, E. O. Burbacher & Co. completed in the Berea grit a second test on the T. R. Wilson farm. It is a very light pumper. This well produced gas from the Big Lime for more than 15 years.

In Section 23, Madison Township, Licking County, the Preston Oil Co. completed in the Berea grit a test on the Nicholas Jaffers farm. It is a 6 bbl. pumper. On a town lot in Alliance, Stark County, the Alliance Machine Co. completed No. 3 on the W. H. Purcell lot. It is a 4 bbl. pumper in the same formation.

On Cow Run, Section 15, Lawrence Township, Washington County, the People's Banking & Trust Co., trustee, completed in the first Cow Run sand No. 28 on the Berger Oil Co.'s lease on the William Reader farm. It is a very light pumper. In Franklin Township, Monroe County, the Preston Oil Co. is drilling on the L. C. Stalling farm.

In Section 4, Coal Township, Perry County, the Hulse-Kuntz & Co., Inc., is drilling in the sand on the C. W. Speckman farm. In Section 7, Fallsbury Township, Licking County, the Pure Oil Co. is due in the Clinton sand on the F. E. Slabaugh farm. In Washington Township, Hocking County, the Gordon Oil Co. is rigging up on the Lone-Burns farm.

WEST VIRGINIA

West Virginia is completing more gas wells than oil producers. In Geary district, Roane County, the United Fuel Gas Co. completed in the Big Injun sand No. 2,587 on the Katherine H. Nixon farm. It is a gasser good for 250,000 feet. In Paw Paw district, Marion County, the Owens Bottle & Machine Co. has a gasser in the same formation on the Edgar Fox farm.

In Church district, Wetzel County, the Carnegie Natural Gas Co.'s No. 10 on the Alice Edgell farm, is showing for a light oil producer in the Big Injun sand. In Spencer district, Roane County, Grow & Decker's test on the C. A. Kendal farm is a gasser in the same formation.

Gassers in Calhoun County

On Steer Creek, Sherman district, Calhoun County, F. F. McIntosh has a fair gasser in the Big Injun sand on the Doctor Stump farm. In the same district, on Rush Run, W. H. Bickel has a gasser good for 250,000 feet on the M. S. Clarke farm. On Pine Creek, Center district, George Hamilton and others have a fair gasser on the Fred Ball farm. On Barnes Run, Curtis district, F. F. McIntosh has a gasser good for 250,000 feet on the J. G. Riddle farm.

The West Virginial fields are completing a few fair pumpers. In DeKalb district, Gilmer County, C. B. Lewis and others have completed in the Big Injun sand a test on the J. A. Kelley farm, showing for a 15-bbl. pumper. In Sherman district, Calhoun County, the Virginian Gasoline & Oil Co. completed in the same formation a second test on the Everet Proudfoot farm. It is a 10-bbl. pumper.

Good Gasser in Mingo County

On Twelve Pole creek, Harvey district, Mingo County, 1,000 feet northwest of the test on the E. D. McManners farm a gasser has been completed in the Maxon sand, estimated good for 2,500,000 feet. In Clay district, Monogalia County, the Carnegie Natural Gas Co. has drilled its test on the McCord farm, on McCord branch of Days run, through the Bayard sand at a depth of 3,310 feet showing for a 2-bbl. pumper.

On Buck run of Sandy creek, Ravenwod district, Jackson County, the South Penn Oil Co. completed in the Berea grit No. 7 on the C. S. McCarty farm. It is a natural producer good for 10 bbls. a

(Continued on Page 105)

WILDCAT WEST OF ST. JOSEPH, KY., IN WESTERN DAVIESS COUNTY

By Whit
Staff Correspondent, Kentucky-Tennessee

OWENSBORO, Ky., July 29.—The bringing in of a second good well on the Morgan farm, a mile west of the Bartlett Pool, makes that part of Ohio County look more encouraging. The original test on the Morgan lease showed 400 bbls. initial, and the second one looks like a 250 bbl. starter. There has been a scramble for leases between this well and the Bartlett Pool as well as westward from the Morgan well toward the Gil Jolly Pool, west of Buford. A dry hole in this territory does not mean anything but the cost of the hole, for a well is likely to be found within a short distance of a failure, which is the history of Kentucky as a whole.

The bringing in of another wildcat to the west of St. Joseph, in the extreme western part of Daviess County, brings that territory once more before the public, and while not a large producer, it is sufficient to bring about further test work.

Eastern Kentucky

Very little development work is doing in the eastern part of Kentucky at this time, although there is still plenty of inside work to do in Johnson and Magoffin Counties.

In District 5, of Wayne County, Porter Abbott and others' No. 7, on the Coffey-Oats lease, is reported good for 5 bbls., while Wm. O. Southern, Jr.'s, No. 9 on the Nancy Jones and others' farm, in District 13, produced an initial of 40 bbls., which is a large well for that old territory.

In Lee-Estill Counties, District 18, J. D. Welch hit a dry hole in No. 3 on the W. C. Burgan farm.

In the Torrent Field of Wolfe County, District 9, Garrison Brothers and others found a duster at No. 6 on the E. B. Roberts property.

In the Beaver Creek Field, of Floyd County, District 21, the Yolando Oil Co. is reported to have found a nice gas well at No. 1 on the Caroline Collins farm. United Carbon Co. has good gas wells in No. 1 S. B. Osborn and No. 1 on the Melvin Allen lease, same field.

Week's Work

A summary of the week's work in the Kentucky fields shows 31 completions, 18 producers with an initial production of 676 bbls., 9 dry holes and 4 gas wells.

County—	Comp.	Oil Wells	Prod.	Dry	Gas
Ohio	11	7	415	3	1
Daviess	8	5	190	3	0
Warren	2	2	5	0	0
Barren	2	1	1	1	0
Henderson	1	1	20	0	0
Floyd	3	0	0	0	3
Wayne	2	2	45	0	0
Lee-Owsley	1	0	0	1	0
Wolfe	1	0	0	1	0
Total	31	18	676	9	4

Ohio County Wells

The best of the late completions in the Ohio County area is the Rex-Pyramid Oil Co.'s second test on the G. W. Mor-

(Continued on Page 105)

Tiffin Field Well Reported 1,000 Bbls.

Southwestern Indiana has 11,750,000 Foot Gas Well.
Dupo Field, Near St. Louis, Getting Good Wells

By Whit

Staff Correspondent, Central West Fields

FINDLAY, Ohio, July 29.—The new field in western Illinois, in Sugar Loaf Township, St. Clair County, just out of East St. Louis, is getting some very good producers at depths varying from 400 to 750 feet, and great activity prevails as it requires but a short time to complete a well and put it on the pump. Out of 18 completions in that field since the last review there was but one dry hole while five of the shallow holes produced better than 100 bbls. in 24 hours. The largest of the wells put 325 bbls. in tankage in 24 hours, another 290 bbls., one 200 bbls., another 160 bbls., and one 125 bbls., the other 12 wells ranging from 5 to 75 bbls. initial.

The old Lima Field of northwestern Ohio is in the gusher class with a well reported good for better than 1,000 bbls. initial on the Rosenberger farm, in Pleasants Township, Seneca County, near Tiffin. The exact production has not yet been announced, but it is as good as the best wells found for years in the Tiffin Field.

Another sensational find comes from southwestern Indiana where a gas well with a volume of 11,750,000 feet was brought in on the Ongett lease, in Gibson County, the largest gas volume found in the entire State since the early development of the old Trenton Rock Field in the northeastern part of Indiana.

The big well in the old Lima Field was completed by W. J. Poyser and others on the Rosenberger farm, Section 31, Pleasants Township, Seneca County, in the new pool recently opened by J. H. Murphy & Sons. As stated it is reported showing better than 1,000 bbls. in 24 hours, but its exact production has not yet been determined by a thorough 24 hours' gauge. In the same area, the Ohio Oil Co.'s second well, 200 feet from the north line and 600 feet from the west line of the Charles B. and Ida Miller farm, in the southeast quarter of Section 31, Pleasants Township, topped the Trenton at 1,429 feet and went 103 feet into the sand to a total depth of 1,532 feet and when put on the pump showed 70 bbls. This is the lease the Ohio Oil Co. bought a few weeks ago from J. H. Murphy & Sons, the discoverers of the new pool. In Liberty Township, same county, the August Oil Co.'s No. 4 well, 250 feet from the south line and 750 feet from the west line of the August Fletcher farm, NW, Section 27, failed to find any oil worth while in the Trenton at from 1,345 to 1,503 feet and will shoot it in the Clinton lime as there was a fair showing of gas in that formation and the owners wish to utilize the gas for heating and lighting purposes. In the same township, J. L. Beam's test, 525 feet from the north line and 220 feet from the west line of the L. C. Park farm, on the map as the F. Wolfe farm, in the SE, Section 17, was a duster. This well topped the Trenton at 1,394 feet and was drilled 178 feet in the sand to a total depth of 1,572 feet. In Jackson Township, same county, the Columbus-Tiffin Oil Co.'s test near the northwest corner of the M. Jacobs farm, in the SE. Section 7, produced 2 bbls. Sand was struck in this well at 1,200 feet and drilled 40 feet into the Trenton.

Largest Well in Sandusky

An unusual sized producer has been uncovered in Washington Township, Sandusky County, in the Gibsonburg Oil Co.'s test near the southwest corner of the Paul J. Fought farm, in the NE, Section 11. Trenton was topped at 1,287 feet and drilled to a total depth of 1,339 feet, or 52 feet in the sand, where it produced an initial of 50 bbls., being the largest producer found in the county for a number of years.

Frank Wahrer and others drilled No. 5 well, 50 feet from the north line and 1,000 feet from the south line of the Frank Wahrer farm, in the NE, Section 11, Noble Township, Auglaize County, known on the oil map as the A. Noble farm. Sand was struck at 1,129 feet and at 40 feet in the sand, produced 20 bbls. initial.

Northeast of Lima in Bath Township, Allen County, Ira B. Post and others' No. 9 on the William Lenney, in the NW, Section 12, pumped 20 bbls. at from 1,314-68 feet, or 54 feet in the sand. B. L. Carman and others' test, 700 feet from the south and west lines of the C. E. Baldwin farm, in the SE, Section 13, same township, pumped 15 bbls. initial from 1,351-1,401 feet.

In the Findlay Field of Hancock County, the Newton Oil Co.'s No. 5 in the northwest corner of the Christ Fullwiler farm, in the SW, Section 28, Liberty Township, pumped an initial of 30 bbls. from 1,250-1,310 feet. N. Harpst is drilling No. 1 Volweiler farm, in Section 29, and L. Cramer is drilling a second test on the John Shanks farm, Section 32, same township. In Eagle Township, Star & Clark's No. 13 well, 600 feet from the south and east lines of the Allice Stauffer, on the oil map as the Noah Foltz, in the NW, Section 5, pumped an initial of 20 bbls. at from 1,326-75 feet, or 49 feet in the sand. In Biglick Township, the Ridge Gas & Oil Syndicate is drilling No. 3 on the Elnore Cross farm, Section 35, and Robert Mitchell, trustee, is starting a test on the W. W. Moore, in Section 21, same township. In Delaware Township, same county, Harmon, Watts and Talbot brought in a gas well with a volume of 555,000 feet on the Austin S. Hickle 113 acres, Section 7, and starting No. 1 on the H. H. Howard 320 acres, Section 12, same township, and in the Wharton gas field.

CENTRAL OHIO

Thirty-one wells were reported for the week in the Central Ohio fields, of which 12 were producers with an initial production of 239 bbls., 7 dry holes and 12 gas wells. The wells in general are small in oil production and the same can be said of the majority of the gas wells. During the week 21 new locations were made and 28 new wells were rigging up or spudding, a total of 49 in new work, indicating greater activity over the territory.

In Ashland County, Lake Township, the Mohican Oil & Gas Co.'s No. 4 on the B. B. Chesrown, Section 3, is credited with an initial production of 15 bbls., from 533-58 feet, which is the well-known Berea sand. Robinson and others' No. 2 on the John Smith 120 acres, Section 9, produced 4 bbls. from the same formation at from 510-613 feet. Same parties' No. 2 C. I. Sellers, same section, was a dry hole at 640 feet. Same parties are drilling on the George M. Heffelfinger, also No. 5 on the Emma A. Devinney, both in Section 9. Harry Farmer is drilling on the P. J. Helbert, Section 5, and the Preston Oil Co. is starting No. 3 on Ellis A. Morris, same section. In Mohican Township, Welty and others' test on the Rosanna Welty farm, Section 5, was a dry hole at from 554-600 feet. In Perry Township, Coast and others drilled in a light gas well in No. 6 on the Ed Barnhart, Section 29, at from 686-98 feet. Preston Oil Co. is drilling No. 3 on the M. Devault, same section. In Greene Township, the Ohio Fuel Gas Co. is drilling No. 1-3,584 on the Maria Jones, Section 20, also drilling No. 1-3,615 on the Arthur Ohl farm, Section 26, Milton Township. East Ohio Gas Co. is drilling on the John M. Hay, Section 19, Hanover Township, same county.

In Medina County, Chatham Township, the Oko Oil & Gas Co., of Lima, drilled in No. 24 on the T. W. Brinker, Lot 16, Chatham Township, with an initial of 25 bbls. In Guilford Township, the Ohio Fuel Gas Co. has a light gas well in No. 2-3,502 on the J. J. Winkler, Section 5. Ohio Fuel Gas Co. drilled deeper and cleaned out No. 1-3,734 on the J. O. Bessinger, Lot 133, Harrisville Township, and Harmon and George are starting a test on the Emaline Hagans, Lot 1.

In Lorain County, the Ohio Fuel Gas Co. is drilling No. 1-4578 on the Charles A. Schaffer, Lot 47, Grafton Township, and drilling No. 1-4741 on the Earl C. Fireback, Section 21, Eaton Township. Same company is drilling No. 2-4785 on the Julia Clark, Sections 13-18, Carlisle Township, and made a location on the Julia Clark farm, Section 13, same township. Dempsey and McGrath made a location on the Matthew Myers, Lot 31, Risgevill Township.

Wayne County

In Wayne County, Congress Township, the Ohio Fuel Gas Co. has a gas well in No. 1-3606, M. Fulton farm, Section 13. Garn-Woodward Oil Co. is drilling No. 4 Mary J. Gearhart, Section 2. Bryan and others' second test on the Willis J. Wise, Section 7, Franklin Township, same county, was dry at from 570 to 572 feet.

In Holmes County, the only change reported is the staking a location for a second test by the East Ohio Gas Co. on the J. G. Stitzline, Section 16, Knox Township.

In Knox County, Brown Township, the Upham Gas Co. made a location on the Rebecca Kunkle, Section 6, and the Cameron Oil Co. made a location for No. 7 on the H. R. Hall, Section 22, Jackson Township.

In Coshocton County, Newcastle Township, Bell Brothers hit a dry hole on the Fred S. Ringwalt, Section 17, at from 629 to 640 feet. Ohio Oil Co. is starting No. 3 on the Robert Rhode, Section 6, Clark Township. In Pike Township, the Ohio Fuel Gas Co. made a location on the D. and L. Rine, Section 4, and is drilling a second test on the Henry M. Rine, same section. Same company made a location on the Lester Pretzeno, Section 6, Crawford Township.

Summitt County

In Summitt County, Greene Township, George Eagon drilled a nice gas well on the Sam Herring, Section 17, in the Newburg sand from 3,611 to 3,631 feet. F. A. Brendall and others are drilling on the Edward Dunn, Section 34, Franklin Township, and the East Ohio Gas Co. is drilling on the J. A. and H. Frank, Section 22, Copley Township.

In Licking County, Fallsburg Township, the Emerald Petroleum Co.'s No. 5 John W. Little, Section 10, produced an initial of 60 bbls. from the Clinton lime at from 2,794 to 2,820 feet, and is starting No. 6, same farm. Murphy Petroleum Co.'s No. 2 well, Section 8, is good for 60 bbls. Whittmer Properties, Trustee, made a location on the U. G. Porter, same section. Hulse & Kundtz are drilling No. 10 Joseph Chaney, Section 1, Perry Township. In the same township, the Ohio Fuel Gas Co. made a location on the J. P. Murphy, Section 15. Settles Oil Co. is drilling No. 3 Nellie Smith, Section 17, and Sterl Brown is drilling No. 5 Ethel Frost, Section 14. In Hanover Township, the North Fork Oil Co.'s No. 6 on the J. C. Williams, Section 4, is reported around 2 bbls. from 569 to 580 feet. Armstrong & Lyttle's No. 12 on the J. W. Motherspaw, Section 12, Franklin Township, produced 3 bbls. from 751 to 761 feet. In Madison Township, the Ohio Fuel Gas Co.'s No. 1 Louis J. Georgetta, Section 23, produced 6 bbls. from 720 to 729 feet.

In Muskingum County, Palmer & Geisinger drilled in a good gas well on the Harry Haines farm, in Perry Township. Pure Oil Co. is drilling on the Lloyd McKee, Section 6, same township, and made a location for No. 2 on the same farm, also made a location for No. 12 on the George Crawford farm, in Jackson Township.

In Athens County, Berne Township, Smith and Thomas drilled a 1-bbl. pumper in No. 2 on the C. C. Curtis, Section 34, in the second Berea sand at 1,365-78 feet, total depth, 1,388 feet. Ohio Fuel Gas Co. made a location for No. 1-4740 on the R. B. McKinley, Section 34, also for No. 2-4786 on the W. A. Clester, same section. Same company is drilling No. 1-4745 on the J. O. Anderson, Section 5, Ames Township; also drilling No. 2-4772 on the Loring Hill, in fractional Section 5. Same company is drilling No. 6-4561 on the J. W. Kincade, in fractional Section 1, Carthage Township, and made a location for No. 1-4743 on the H. C. Gates, Section 16, same township. In Lodi Township, the same company is drilling No. 1-3594 on the E. L. Sargent farm. In Athens Township, Craig and others' No. 7 on the Hattie Beasley, Section 32, is a fair gas producer at 1,148-58 feet. Gross and others are drilling No. 3 on the F. P. White, Section 19, Lee Township.

In Meigs County, Sutton Township, Tyree and others' No. 11 on the William Carnahan, Section 11, is credited with 10 bbls., getting two pay sands, one in the Mitchell sand from 527 to 533 feet, good for 5 bbls., and another 5-bbl. pay in the First Cow Run sand from 620 to 640 feet. R. C. Miller and others' No. 3 W. B. Cross is reported dry in the Berea sand. Rood & Palmer are drilling on the Augustus C. Circle, Section 12, and R. C. Miller and others are drilling No. 4 W. B. Cross. Ohio Fuel Gas Co.'s No. 1-4734 on the W. L. Whaley, in fractional Section 18, is a fair gas well in the Maxon sand at from 835 to 843 feet.

Jackson County

In Jackson County, Franklin Township, the Ohio Fuel Gas Co. is drilling No. 1-3571 on the E. Stiffler, Section 2. Same company is drilling No. 1-3559 on the W. H. Talbot, Section 36,,Coal Township. Penn Ohio Gas Co. made a location for No. 7 on the Leon Evans, Section 35, Lick Township.

In Vinton County, Jackson Township, the Southern Oil Co.'s No. 5 John C. Bone, Section 5, reported at 8 bbls., and in Swan Township, same county, I. C. Robinson and others' second test on the Christ Herrold, Section 35, in a very good gas well in the Clinton lime at 2,806-19 feet, total depth, 2,827 feet. Ohio Fuel Gas Co. is drilling No. 1-4737 on the B. Herrold, Section 3, Elk Township.

In Mahoning County, Smith Township, Pittsburg parties drilled a dry hole on the Bert Shocker, Section 32.

In Starke County, Lawrence Township, Johnson and Stoltz drilled a good gas well on the Steve Koeis, Section 4, at 3,910-12 feet.

In Guernsey County, Westland Township, the Cambridge Glass Co. drilled a light gas well on the H. H. and Mary

(Continued on Page 102)

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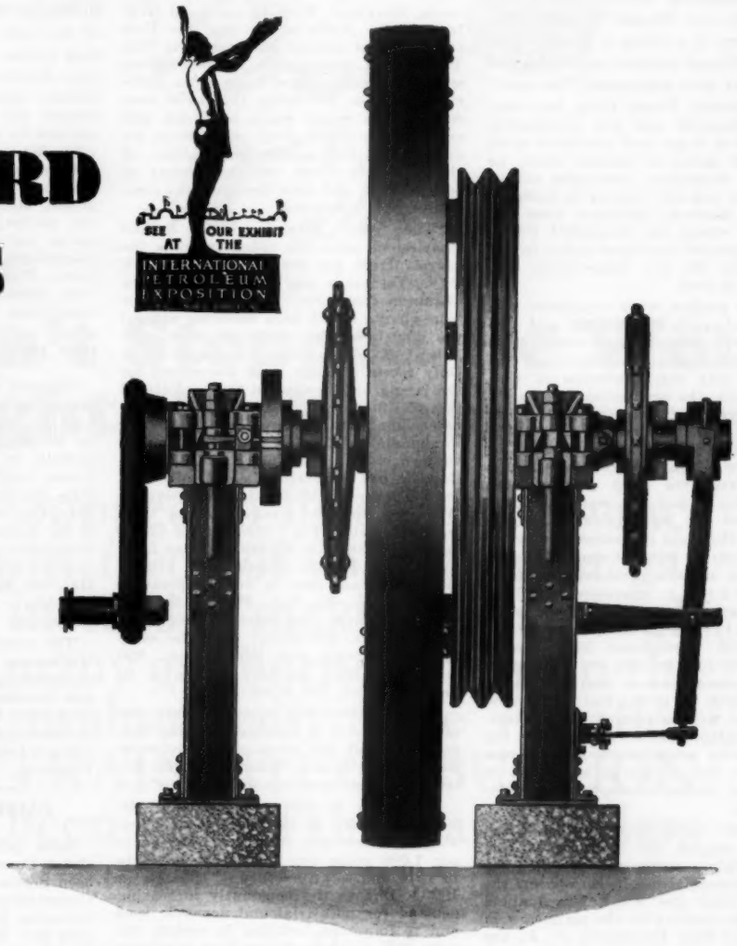

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Natural Gas Developments

GAS FOR CHICAGO FROM CARBONIZING PROCESS

Formation of the Industrial Power Corp. for the processing of coal and the furnishing of electrical power, gas and steam to the manufacturing district of Chicago, including Packingtown, the central manufacturing district, the Union Stock Yards and Transit Co. and adjacent territory, by a group of Boston, New York and Chicago business and industrial interests has been announced.

The Industrial Power Corp. has been privately financed and has outstanding $10,000,000 of 6 per cent preferred stock and 200,000 shares of common stock, no par value. Subsidiary companies will be formed later and will operate in Indiana, Minnesota, Missouri, Michigan, Iowa and Wisconsin, where the Industrial Power Corp. has secured exclusive rights to the processes for the low temperature carbonization of coal.

The new project when completed will cost approximately $40,000,000 and will be the first comprehensive combination of the low temperature distillation of coal processing with the generation of electrical current, the production of gas and the manufacture of domestic fuel. Work on the new plant will be started immediately and the present schedule calls for the delivery of service to the Chicago industrial area the early part of next year. Rights of way of streets have been secured, and the right of way for gas mains and electrical transmission lines.

The Industrial Power Corp. will begin construction of a central station power plant having approximately 100,000 kilowatt capacity and designed for an ultimate steam plant of twelve 2,500 horsepower high-pressure boilers. The fuel for this central station will be secured from a coal processing plant in which all of the fuel in the new development will be treated by low temperature carbonization to extract the most valuable constituents of the raw coal before the remaining solid fuel is released for power development and domestic use.

This low temperature carbonization plant will employ the same process for low temperature carbonization, which has been in commercial use in Europe for the past five years and which was adapted to American practice by the plant now in operation at New Brunswick, N. J., the first unit of which is supplying 3,500,000 feet of city gas daily to the Public Service Corp. of New Jersey.

The carbonizing plant at Chicago is designed for an ultimate capacity of 45,000,000 feet of gas per day. The gas from this process is said to be of especially high heating value and may be used directly for process work or blended with Blau gas to meet the requirements of standard city gas.

Frederick H. Prince, Boston banker, who is interested in the organization, said:

"Contracts are being entered into for the sale of tar, light oils and motor spirits, derivatives of low temperature carbonization, from the new plant, so that a ready market is assured for all of the by-products of the carbonizing process."

ALBERTA FRANCHISE

CHATHAM, Ontario, July 27.—A. N. Walker of Calgary has applied for a natural gas franchise for Red Deer, Alberta. If the franchise is granted Mr. Walker and associates will explore adjacent territory for possible gas production, and organize a company to handle distribution.

MAY PIPE NATURAL GAS TO NEW YORK AND EAST

Natural gas may eventually be brought to New York City and other metropolitan areas throughout the country, according to John Eoghan Kelly, vice president of the Southeastern Gas Co., a subsidiary of Inland Utilities, Inc., recently formed to acquire extensive holdings in Pennsylvania, Maryland, West Virginia and Kentucky. Mr. Kelly added that the first application of natural gas brought to New York would probably be in combination with gas manufactured from coal. Efficient methods for doing this have been developed in recent years, he added, and such mixing offers great possibilities for augmenting the quality and volume of their product, from the standpoints of both natural and manufactured gas companies. He continued:

"The West Virginia Field around Charleston, some 400 miles away, is the nearest large gas acreage to New York City. Yet gas is now being piped greater distances than this. St. Louis has for more than a month been receiving natural gas for industrial purposes piped 475 miles from the northern Louisiana Field. Only recently, plans were announced for the laying by the Central States Natural Gas Co. for a pipe line more than 1,000 miles long to bring gas from the Texas Panhandle to Chicago and other middle western cities. The Imperial Oil Co. of Canada has authorized a 500-mile line from Turner Valley in Saskatchewan to Winnipeg, and is planning other lines from this field. The Cities Service Co. is building a 500-mile $27,000,000 line from Shreveport, La., to Birmingham. Other long pipe lines now in active operation are from Amarillo, Tex., Field to Denver, Colo., 300 miles; northern Louisiana to New Orleans, 200 miles; from the same field to Atlanta and Birmingham, 350 miles, and from southern California to San Francisco, 300 miles.

"Many other long distance lines are projected and it is entirely probable that eventually all our great cities, including New York, Chicago, Philadelphia and Detroit, will be receiving natural gas."

Mr. Kelly in his statement said the wholesale price at the well in the West Virginia Field has risen from 1½ cents per 1,000 cubic feet in 1904 to 4 cents in 1910 and to an average of 10 cents in 1929. Due to the constantly increasing demand for industrial and domestic uses and to improved facilities in piping, the price will undoubtedly go to a minimum of 15 cents within a few years, assuring a steadily increasing income to producers, he said.

TO REPLACE OTTAWA LINE

The Cities Service Co. recently has completed plans to replace the main pipe line from the crossover in Ottawa, Kan., to a point south of Lawrence, known as the Topeka tap. This new line will be an 18-inch, replacing the old 16-inch line. The line will be about 18 miles in length. It is not expected to follow exactly the same route as the original line, and when this project is completed the old 16-inch line, which has been in use between the junction and the Topeka tap, will be reclaimed. The company also plans to replace about 15 miles of the 12-inch line extending toward Topeka, with a new 16-inch line. The entire project will increase the potential delivery of gas to Topeka, Lawrence, Leavenworth, Atchison, St. Joseph and other cities in northeastern Kansas.

The company has also announced that the survey for the extension of the company's pipe lines from Atchison, Kas., north through Horton and Hiawatha to Falls City, Neb., has been completed.

NEW MISSOURI DISTRIBUTION

C. L. Carr, for a number of years superintendent of the Capital Gas & Electric Co., at Topeka, Kans., has been transferred to the St. Joseph Gas Co. as superintendent. H. H. "Lead" Harrington who has been superintendent of the St. Joseph Gas Co. has been transferred to Monett, Mo., where he will be in charge of the work of building the gas distribution system in that city and others in that district. According to Charles H. Koinm, superintendent, work of piping Monett will start in two weeks. It is planned to start work on piping Marionville, Mo., within a week and later it will be necessary to build a distribution system in Billings, Forest Park, and Republic, Mo., where the Gas Service Co. has natural gas franchises. All these towns are on the line to be built to Springfield, Mo. Another town on the route, Pierce City, has practically all been piped, this work being under the supervision of H. L. Peck.

GAS FOR NORTH KANSAS TOWNS

Thirteen more northern Kansas towns are to get natural gas. The Kansas Pipe Line Co. filed applications with the public service commission for authority to operate in 10 Kansas cities, and the Union public Service Co. filed applications for three cities. The Kansas Pipe Line Co. is the natural gas subsidiary of the Kansas Power & Light Co., of the Studebaker-Insull utilities. It wants authority to operate in Seneca, Beattie, Hanover, Marysville, Axtell, Blue Rapids, Frankfort, Washington, Wamego and Waterville.

The company has large gas interests in McPherson and Barber Counties, and an extensive pipe line system in Central and Northern Kansas. The Union Public Service Co. is one of the many Doherty subsidiaries. It asked for authority to sell gas to Cawker City, Jewell City and Formosa.

CALIFORNIA EXTENSIONS

LOS ANGELES, Calif., July 27.—Coast Counties Gas & Electric Co. has been granted permission by the Railroad Commission for the construction of an extension from the natural gas transmission line being installed by the Pacific Gas & Electric Co., through the county of San Benito or to the nearest branch, and to construct a complete gas distribution system in the township of San Juan for the distribution of natural gas.

Pacific Gas & Electric Co. has been granted authority by the Railroad Commission to construct a natural gas transmission line project from a point on its main gas transmission line near Hollister, to its gas manufacturing plant in the city of Salinas, Monterey County, and thence to its gas manufacturing plant in the city of Monterey, at an estimated cost of $500,000.

GAS SERVICE FRANCHISES

The Gas Service Co. has been granted 16 franchises to serve natural gas in cities in Kansas and Nebraska, as follows: Greenburg, Kans.; Bucklin, Kans.; Mankato, Kans.; Ellsworth, Kans.; Beloit, Kans.; Superior, Nebr.; Osborne, Kans.; Smith Center, Kans.; Glen Elderr, Kans.; Downs, Kans., and Kanopolis, Kans. Franchises also have been granted at Cawker and Luray, Kans., and at Horton and Hiawatha. It is expected the city council of Falls City, Nebr., will grant the company a franchise at its next meeting.

MISSOURI-KANSAS CO. GETS KENTUCKY RIGHTS

Missouri-Kansas Pipe Line Co. has acquired natural gas and mineral production rights in 50,000 acres of land in Caldwell County, Ky., Frank P. Parish announces. The Missouri-Kansas Co. is already drilling for gas in eight Kentucky counties and over an area 80 miles long and practically 50 miles in width, extending from the district around Owensboro, on the north to a point below Princeton, in Caldwell County, on the south.

Among the counties in which the Missouri-Kansas Co. is operating actively at present are Muhlenberg, Hopkins, Christian, Daviess, Webster, Henderson and Todd, while drilling is to begin in the near future in Warren and Logan Counties. In Daviess County on one lease, four wells now have an open flow of 10,000,000 feet of gas per day. The company says small operators in the western Kentucky district are turning their natural gas supplies over to the Missouri-Kansas Co., which is encouraging drilling by small independent companies and land owners, not only in Kentucky but in the Kansas and Missouri territories, where Missouri-Kansas operates, as well.

MISSOURI KANSAS PIPE LINE

Missouri-Kansas Pipe Line Co. has recently taken over leases on nearly 40,000 acres of proven natural gas territory in Wilson, Neosho and Montgomery Counties, Kansas, according to Frank P. Parish, president, and is making plans to enlarge its operations in that territory, which extends over 625 square miles. Approximately 500 shale gas wells have been drilled in by the company in the three counties.

Aside from a contract with the American Pipe Line Co. for the delivery of near 6,000,000 feet of gas per day for partial industrial and domestic consumption by Kansas City, Mo., Missouri-Kansas Co. has contracts in the Kansas area for delivery of natural gas to the Jackson County Light, Heat & Power Co., at Independence, Mo.; Belton, Martin City and Grandview, Mo.; Bucyrus and Somerset, Kans.; Paola and Osawatomie, Kans.; Louisburg, Kans., and Ottawa, Kans. Open flow gas test of the Missouri-Kansas Co., in the Kansas City and East Kansas area alone is stated by the company to be approximately 170,000,000 feet per day.

GAS STORAGE APPROVED

CHATHAM, Ontario, July 27.—C. J. Yorath, president of the Canadian Western Natural Gas, Light, Heat & Power Co. of Calgary has announced that some definite action toward the storage of waste gas from the Turner Valley in the Bow Island Field may be taken in the near future. Experiments have indicated the possibility of storing about 3,000,000 feet a day in the exhausted sands of the Bow Island Field with present facilities It will be necessary to force gas into the sands under about 750 pounds pressure. Geological authorities of the University of Alberta have pronounced the project feasible.

TABER GAS SERVICE

CHATHAM, Ontario, July 27.—Arrangements have been practically completed by the Canadian Western Natural Gas, Light, Heat & Power Co. of Calgary to supply gas to Taber, Alta., before the end of August.

IT HAS BEEN SAID:

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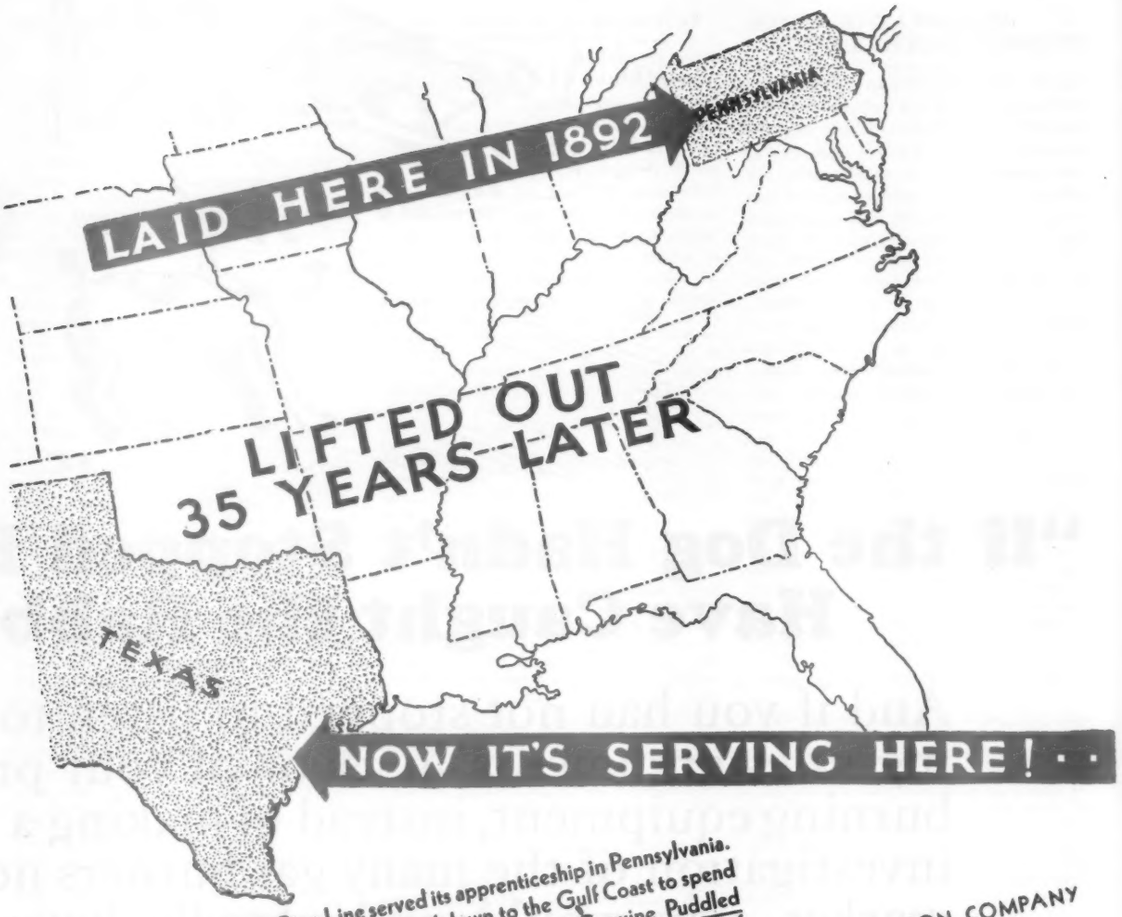

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National Petroleum News

June 5, 1929

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GREENSPON'S FOR ALL PURPOSES

Field Problems and Their Solution

EDITED BY THOMAS F. SMILEY

In order that men connected with the drilling, producing and transporting branches of the petroleum industry may procure quickly a solution of many problems confronting them from time to time in their work, The Oil and Gas Journal has arranged with leading engineers and other recognized authorities to answer questions submitted by readers of this publication pertaining to the work of drilling and producing crude oil and transporting this product.

Everyone is invited to submit questions freely. These questions will be submitted to proper authorities by Mr. Smiley, who edits the page, and answers, based on the best available information, will be published. Each question should give as much detail as possible, especially where it relates to matters where depths of sands, types of sands and operations on adjoining properties would have a bearing on the problem involved. The source of all questions will be considered as confidential and only initials will be published in connection with the question.

In this connection, The Oil and Gas Journal will be glad to publish articles from field men who have devised new methods or practices which are improvements.

In case an immediate answer is important, one will be given by mail if the writer requests it.

HAVING TROUBLE WITH SCALE

We have been experiencing trouble with scale forming on the inside of the water jacket on gas engines and will appreciate advice as to how it can best be removed without injuring the cylinder walls or other parts of the engine. I have read that hydrochloric acid is a good thing. If hydrochloric acid is used to dissolve the scale, what strength acid should be used?—A. M. B.

In Bulletin 224, issued by the Bureau of Mines, and written by Prof. H. C. George, of the University of Oklahoma, it is stated: "The deposition of scale or lime on the walls of the water jacket causes heating of the engine cylinder, because it insulates the cylinder and prevents the circulating water from absorbing heat. This deposit of scale also obstructs the pipes and water passages and prevents proper circulation. If the water circulation is partly or entirely obstructed, the engine should be stopped and the scale removed from the jacket.

"The scale can be softened by draining about half the water out of the jacket and pouring in a gallon of kerosene oil. The inlet and outlet pipes are then plugged and the engine is started and run for 15 or 20 minutes with the mixture of oil and water in the cylinder. The engine is then stopped and allowed to cool. The scale becomes soft like mud and can readily be removed. A mixture of 1 part of sulphuric acid to 10 parts of water allowed to stand in the engine jacket for 10 or 12 hours will give the same results."

Another method recommended by a manufacturer of gas engines consists of setting up a temporary water supply of a few hundred gallons by using a small tank. Several barrels connected together to form a reservoir will serve the purpose.

This auxiliary system is connected with a small centrifugal pump in such a manner that the water will be passed through the water jacket of the engine and back to the reservoir.

The water is mixed with about 10 per cent of commercial muriatic acid (the trade name for hydrochloric acid); that is, if 200 gallons of water is used in the auxiliary system, about 20 gallons of commercial acid should be added.

By means of the centrifugal pump this mixture is forced through the water cooling system, and discharged into the mixing tank and at the same time the engine is run. It is essential that the temperature of the outlet water from the engine jacket be closely watched during this test and it should not be permitted to reach a temperature of over 125 degrees Fahrenheit. If it tends to go above this temperature the test should be stopped and if the scale has not all been removed the washing should be started over again after the water has cooled.

As a means of preventing this scale from forming inside the water jacket it has been found advisable to regulate the water temperature and never permit the water in the cooling system to reach a temperature of over 130 degrees Fahrenheit at the outlet from the engine water jacket, and if this low temperature is maintained and plenty of water used scale will not form to any marked degree inside the water jacket or in the pipes in the circulating system.

SANDSTONES AND LIMESTONES

In drilling they refer to passing through sandstone and limestone formations, and also to sandy-lime formations, and I would like to learn something of how these terms originated and the character of the rocks referred to in this manner.—H. G. J.

Sandstone is just was the name would imply, a rock formed from grains of sand laid down in water and it occurs in all degrees of hardness from soft stone that can be crushed in the hand to quartzite, formed by the deposit of crystalline quartz cemented together with the sand grains.

The color of sandstone varies according to the character of the cementing material from pale yellow to a deep red or brown, the amount of oxide of iron in the mass determining the shade.

Lime, or calcium carbonate and silica form the common cement of the white sandstone.

The sand grains are originally derived from material broken from the igneous rocks or from sedimentary rocks that have been reworked, the larger pieces being broken finer by attrition and grinding usually while being moved by water.

Sand usually is considered the finer portion of the sedimentary formations; that is, finer than pebbles and yet of noticeable size, such as beach sands or river sands, and these two classes of sands can be recognized by the fact that river sands are usually angular and beach sands rounded, owing to the fact that the river sands are usually nearer the source rock from which they were eroded and therefore have not been subjected to the same amount of wearing or attrition as the beach sands which have traveled much further to find their final place of deposition.

Limestones are formed principally of calcium carbonate and result from the deposition of calcium salts in water, or they may be due to the action of corals and other marine organisms that have lived in the old seas, or for that matter still live in our present oceans and seas.

Limestone is formed in two ways by these minute organisms, first as a secretion passed through the body of a marine animal and afterward slowly settling to the bottom of the body of water, and second, by the deposition of the body of the marine organism on the sea floor after the animal has died.

The color of limestone varies from a dull drab to the more brilliantly colored marble, this latter stone being one of the limestone or calcite series.

Sandy limes are formed by a combination of conditions that are required to deposit both sandstone and limestone, and the result is a mixture of both kinds of rocks, and usually represents a change in the conditions of the waters when the materials were laid down, for the limestones usually require waters that have much less velocity or movement than the sandstones.

Sandstones are formed through the mechanical work done by flowing streams that move the small pieces of igneous rock and shape it, while the limestones are laid down in quieter waters by settling of secretions from marine animals and their bodies and by the precipitation of calcium carbonate out of a solution due to changes in the character of the waters in which the calcium carbonate has been carried.

WHY WAS IT CALLED THAT?

FINISHING BAREFOOTED

This term has two meanings in oil-field vernacular. In one use it refers to completion of a well in a formation that does not cave easily, prompting the operator to refrain from using any form of strainer or perforated joint opposite the oil sand, thus finishing the well "barefooted."

In another use the expression is common among drillers whose employers have not paid them, hoping that the well will enable them to discharge obligations to the workmen. In such cases the members of the crew say they have "finished barefooted," referring to their financial condition.

The first use ordinarily applies to rotary drilling operations and the other usually is heard in connection with cable-tool wells.

COURSES IN ENGINEERING

Are you in position to advise us as to what universities or colleges are offering courses in petroleum and refinery engineering and as to the heads of these departments?—L. G. M.

The following institutions offer a course of study and field work designed to fit the student for entrance into petroleum production, petroleum refining, geological exploration or pipe line work: University of California, Berkeley, Calif.; University of Pittsburgh, Pittsburgh, Pa.; Colorado School of Mines, Golden, Colo.; University of Southern California, Los Angeles, Calif.; University of Oklahoma, Norman, Okla.; Missouri School of Mines, Rolla, Mo.; Stanford University, Stanford, Calif.; University of Tulsa, Tulsa, Okla.; Agricultural and Mechanical College of Texas, College Station, Tex.; State College of Washington, Pullman, Wash.; University of Minnesota, Minneapolis, Minn. An inquiry addressed to the president of any of these institutions will bring detailed information concerning the courses offered.

In this connection you may find of interest an article, "Schools Perfecting Petroleum Courses," in The Oil and Gas Journal of November 1, 1928.

NEEDS WORK ON GEOLOGY

Could you [illegible] where I could obtain a short, practical course in oil production? I am contemplating buying some shallow oil producing leases and would like to have a pretty good working knowledge of oil production. How do you go about determining a fair price for an oil lease? An oil royalty? I have read your article in the November 1, 1928, issue, but consider these courses too long as I do not intend to be a petroleum engineer.—C. W. S.

For your purpose it would seem that you could get all the information needed from any one of the several popular works on oil field geology. It is suggested that you examine copies of the books in your public library and decide upon the ones best suited to your particular needs.

There are several good geologies that give answers to most of the questions in your letter and some of them give formulas for estimating oil sand saturation if certain factors are known.

These things are not difficult to work out, but as there are various factors involved you can be served best by taking a brief reading course in the general subject of oil geology.

Bulletin 623 of the United States Geological Survey and Bulletin 206 of the United States Bureau of Mines, each obtainable by addressing these departments of the Government at Washington, D. C., deal with the subject of leasing. The American Institute of Mining and Metallurgical Engineers also has some literature on leasing. You can find out about this by addressing an inquiry to H. Foster Bain, editor and secretary, 239 West Thirty-ninth Street, New York. The University of Oklahoma, Norman, Okla., has a work on leasing which can be obtained from its bookstore.

"Oil Royalties," by Edwin I. Reeser, may be obtained at bookstores or from the Dexter Publishing Co., Tulsa, Okla.

TESTING POWER VARIATIONS

Is there a simple method of making a test on the effect of a counterbalance on a pumping well other than by using a dynamometer? We use electric motors for pumping and a wattmeter is not always handy at the well, and if there is any other means of securing some idea of what the well is doing under a certain counterbalance condition I would like to know of it.—G. H. Y.

The dynamometer and wattmeter methods are of course the most reliable means of determining the power variations at a motor, but if neither of these instruments is available, fairly reliable readings may be obtained with a tachometer. By using the tachometer in the usual way and noting the speed variations it is possible with a little experience to judge quite closely as to the effect of the counterbalance.

Speed indications in a motor will indicate to some degree the power used and by noting these variations in power output a gauge as to the effect of the counterbalance can be obtained. With a gas or steam engine it is possible to do the same thing if a close study first is made of the speed characteristics of the engines under normal conditions.

This suggestion is given only as a means of getting a comparative idea of how a well is pumping and not as a definite method of checking the efficiency of any counterweight or pumping conditions.

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Maximum Production

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Minimum Power and Maintenance Cost

What price production? Oftentimes a high production is obtained at a high cost. This instrument enables you to obtain volume production and do it with economy.

The Martin-Loomis Pump Dynamometer

Determines Counter-balance

Proper counterbalancing saves power and smooths out rod action. This instrument accurately checks counterbalance.

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Enables you to check the loss of power between the input and amount delivered at the polish rod. Checks the mechanical efficiency of different pumps. Overcomes rig upkeep by spotting excessive vibrations.

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WEIGHT RECORDING, MEASUREMENT AND CONTROL

EQUIPMENT AND SUPPLIES

DRIVE CHAIN PRESENTS PROBLEM IN DRILLING

By Charles Markey
Engineer, Link-Belt Co., Indianapolis, Ind.

Obtaining a high degree of efficiency with drive chains has been a constant problem in oil-well drilling. Increasing depth of wells and the high drilling speeds called for heavier duty, more ruggedly built chain and the steel roller chain was developed.

Care of the chain by the user cannot be such as to insure all of the things being done which ordinarily increase the life of the chain. The problem, therefore, resolved itself into one of designing a chain to meet unusual requirements for strength and durability.

It required careful and accurate planning of parts and proportions, selected steels of special analysis, special heat-treating and case-hardening and accurate finish and workmanship, to develop a strong enough pin surrounded by a bushing and a roller which would withstand the heavy shocks encountered in oil well service. For that particular type of work it was found that the originally built steel chain would not always hold up under the terrific strains and shocks to which it was subjected by high-speed drilling rigs. The most vulnerable point in this steel chain was the solid roller with which it was equipped. Upon occasion this roller would break, causing delay and expense.

This breakage was caused by the construction of the roller rather than the material of which it was made. Formerly the rollers were made from a solid, cold-rolled rod of steel, the center being drilled out. Formed in this way the grain of the steel ran lengthwise of the original rod, and not around the roller. Hence the strains and blows endured by these rollers tended to crystallize and crack them until a weakened roller would give way and cause breakage, delay and expense.

The remedy, now so obvious, was at that time unknown. It remained for an engineer to hit upon the idea that if the fiber of the metal were to run around the roller, it would give the greatest strength and resilience, and the greatest resistance to shock; then oil wells began to be drilled deeper and drilling increased in speed so the chain must be further improved.

One result was the SS-40 plus and the SS-124 plus, manufactured by the Link-Belt Co., Indianapolis, Ind. The curled roller was made from a special alloy steel; bushings were made of special steel stock, smooth and thoroughly case-hardened. Construction of the side bars prevented rotation.

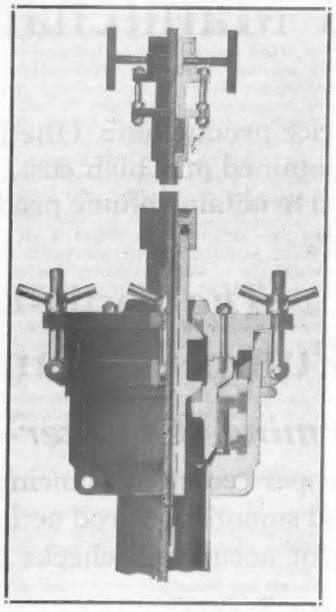
The SS-40 has an ultimate strength of 25,000 pounds. For heavier work the SS-40 plus and the SS-124 plus have strengths of 52,000 and 90,000 pounds respectively.

INSTALLS EIGHT 60-H.P. DIESELS

The Texas Empire Oil Co. recently ordered from the Cooper-Bessemer Corp. eight Bessemer Diesel generating sets for auxiliary service in stations in Cushing, Okla.; Lowry City, Mo.; Center, Mo.; Heyworth, Ill.; Nowata, Okla.; Bunceton, Mo.; Virginia, Ill., and Ballou, Ill. The engines are of the completely enclosed type, stream line in design, and are entirely self-contained. Engine and generator are mounted in a single compact unit which takes up little floor space. The engines are of 60 horsepower at 400 revolutions per minute. The generators are 43.8 Kva., 80 per cent P.F., alternating current, 440 volt, 3 phase, 60 cycle, with direct-connected exciters.

OIL-SAVING DEVICE AIDS IN CABLE-TOOL DRILLING

Cable tool drillers who have had difficulty in drilling oil and gas wells under high pressure will be interested in the new Kerotest high-pressure oil saver, which the manufacturer says has saved many West Texas and Canadian oil operators thousands of dollars by conserving the oil and gas ordinarily lost in high-pressure wells.



The device consists of a patented ball-and-socket forged-steel swivel mounted in a cast-steel main housing. The higher the pressure the greater force is exerted to maintain a tight seat on the swivel joint. The swivel joint is so designed as to maintain the cable in alignment, saving the wire line from wear.

The cast-steel main housing is equipped with a specially designed oil-resisting packing ring which is held in position by bronze lock rings. It is so designed as to permit the well pressure to be actuated behind the rubber packing ring. Any increase in the oil or gas pressure automatically produces a greater pressure on the rubber packing ring.

This oil saver is made by the Kerotest Manufacturing Co., Pittsburgh, Pa.

CATERPILLAR OFFERS A NEW ELEVATING GRADER

The Road Machinery division of the Caterpillar Tractor Co., San Leandro, Calif., has ready for the market the Russell Sixty elevating grader. It has greater capacity than any other model previously put on the market by "Caterpillar." This machine is built for power take-off only and no provision for bull gear drive has been made. Elimination of the wheel drive makes the construction stronger and simpler. The Russell Sixty weighs 12,800 pounds. The line shaft is $2\frac{7}{16}$ inches in diameter and is fitted with self-aligning roller bearings. The countershaft sprockets and wheels operate on roller bearings. Freedom from repair is further assured by bronze bushings for both upper and lower drum shafts. Convenient foot latches for all adjustment ratches increase ease of operation. The elevator belt is 42 inches wide.

ACCURATE MEASUREMENT OF FLOW IS IMPORTANT

Accurate measurement of flow at high temperatures and high pressures is an important part of the general problem of high pressures now commanding much attention in the field of steam plant design and in other applications, such as oil refineries, the chemical plants and other industries. The automatic control of flow at these high pressures and temperatures, extremely desirable in many applications, adds further complications to the manufacture of flow metering equipment designed to cope with high pressure conditions.

Among installations of this character dealing with high pressures are several made by the Brown Instrument Co., Philadelphia. In these installations the Brown forged steel manometer is used with the Brown electric flow meter, operating on the inductance bridge principle, to govern specially constructed remote control valves. One of the latest installations of this character handled by the Brown Instrument Co. employs a valve designed to control automatically the feeding of hot oil to a petroleum cracking still. The valve is built to operate at 1,300 pounds pressure and 600 degrees Fahrenheit temperature. This valve in the still feeder line is controlled by the setting of a Brown automatic control flow recorder located on the instrument panel of the control house, which may be any distance from the still. This installation is typical of many applications to the control of steam, water, process liquors, gases, etc.

BIT DRILLS AND REAMS IN THE SAME OPERATION

A disc bit that drills and reams the hole at one time, the BJ reaming type rotary disc bit is being manufactured and distributed by Byron Jackson Co. of Los Angeles, Calif. The bit portion of this tool is practically the same as the former BJ rotary disc bit, with the addition of two underreamer rollers, one on each side of the heavy shank.

As the name implies, the tool is a combination reamer and disc bit, and it was designed to supply the urgent need for a smooth-running, fast-digging hard formation bit that requires no after-reaming. A feature of the bit is its ability to make hole faster under extremely light weight, which, according to field experts, helps in making straighter hole.

While reaming the hole out to gauge the side rollers of the BJ reamer disc bit, through continuous contact with the side walls, serve to keep the discs centered and straight, further aiding in making a straight hole. The reamers are down, close to the discs, and give a smooth, steady running action, which the manufacturer says will dig through the hardest formation and leave the hole absolutely to gauge. Details of construction and operation are given in a bulletin which may be had by addressing the manufacturer.

DOLLISON VICE PRESIDENT

At a meeting of the board of directors of The Republic Rubber Co. in Youngstown, Ohio, O. S. Dollison, sales manager, was elected a director and vice president in charge of sales. Mr. Dollison has been in the rubber industry for 20 years, and has been active in the direction of Republic affairs since 1922.

UNCERTAINTY IN ROTARY DRILLING IS DECREASED

The G. & M. well tester, manufactured by the G. & M. Co., Inc., Dallas, Tex., is designed to give an open and unobstructed passage from the tested formation to the surface, eliminating the necessity of setting casing until the operator knows that he has a well.

In locating uncharted formations, the practice is to core or rat-hole ahead, using a core-barrel or a smaller bit, and saving a shoulder on which to set pipe. This tool is run on the drill pipe and "packs-off" in the top of the reduced hole. The pipe goes in empty, and the valve which moves in unison with the packer mandrel is closed. When the cone-shaped, laminated packer is gripped by the top of the reduced hole, the weight of the drill pipe seats the packer and automatically opens the valve. The fluid weight is caught at once and sustained by the packer and that pressure is removed from the formation tested, just as if casing had been set, and the well baled to that point.

The fluid, if any, in the formation, will then rise in the drill pipe, and if there is a flowing well, it will flow out the top. If not a flowing well, when the weight of the drill pipe is lifted the valve in the tool automatically closes and entraps and holds such fluid as does come in, and the exact height to which it rises can be computed and determined upon breaking out the pipe.

The valve movement both in opening and closing is positive. It opens only after the packer is seated and must close before the seat can be broken, both operations working automatically. Furthermore, you can always know whether or not your packer seat is holding by watching the fluid around the drill pipe in the top of the surface casing. If, after setting the pipe down, the fluid remains level with top of casing, the operator knows that it is not passing the packer below, and that the seat is holding.

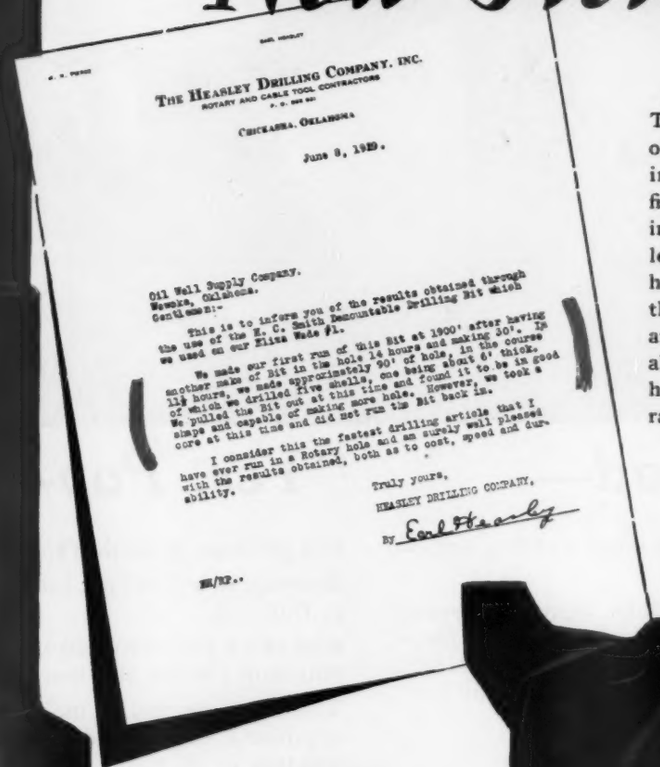
APOLLO LANTERN ANNOUNCED

The Delta Electric Co. Marion, Ind., has announced the new Delta "Apollo" electric lantern, which embodies improvements over the old Delta No. 10. The

new Apollo is chromium trimmed and finished in bright red enamel. It stands $7\frac{1}{2}$ inches high. A large reflector surface provides a strong, steady working light for fully 300 feet. Two ordinary No. 6 dry cell batteries are used to produce current.

Conquering New Fields!

H. C. Smith Type "B" Demountable Drilling Bit.



THE HEASLEY DRILLING COMPANY, INC.
ROTARY AND CABLE TOOL CONTRACTORS

CHICKASHA, OKLAHOMA

June 9, 1929.

Oil Well Supply Company.
Newark, Oklahoma.
Gentlemen:-

This is to inform you of the results obtained through the use of the H. C. Smith Demountable Drilling Bit which we used on our Kline Wade #1.

We made our first run of this Bit at 1900' after having another make of Bit in the hole 14 hours and making 30'. In 11½ hours, we made approximately 90' of hole, in the course of which we drilled five shells, one being about 6' thick. We pulled the Bit out at this time and found it to be in good shape and capable of making more hole. However, we took a core at this time and did not run the Bit back in.

I consider this the fastest drilling article that I have ever run in a Rotary hole and am surely well pleased with the results obtained, both as to cost, speed and durability.

Truly yours,
HEASLEY DRILLING COMPANY,
By Earl Heasley

EH/EP..

The phenomenal success of the H. C. Smith Drilling Bits in California fields is being duplicated in Oklahoma. Mr. Heasley's letter, reproduced here, is additional proof that these drilling bits are equally effective in all formations, making hole with astounding rapidity and ease.

The New Type "C" Demountable Drilling Bit includes new features of construction designed to give still greater efficiency in rotary drilling.

H. C. SMITH
MANUFACTURING CO., INC.
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Types "B" and "C"
Demountable Drilling Bits

TRADITION PROGRESS

"Here, Lad—

We've got to get some more welding equipment for the refinery.

While we have no kicks against present welders—yet, my friend who sells me electrical stuff wants me to try their welder. Perhaps it might do a still better job."

The Lincoln "Stable-Arc" Welder

— welds easier
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because of the steady uniform arc throughout entire welding range, which is the result of:

Variable voltage design
Laminated magnetic circuit
Separately-excited generator field
Double control of welding heat
All steel construction

No other welder has all these features.

"Yes, Pop—

and perhaps it wouldn't.

Anyway it will take a lot of experimenting to find out.

And since you won't do the experimenting, you won't know the inside story.

There are several of us in the plant whose combined experience covers all types of welders in all parts of the country.

These operators have done all the experimenting for you—at other people's expense. And their vote is for Lincoln 'Stable-Arc' welders—unanimously.

So why try?

Experimenting with welders is like experimenting with mushrooms or matrimony—you don't find out until it's too late."

The Lincoln Electric Co., Dept. No. 26-8, Cleveland, Ohio

LINCOLN "Stable-Arc" WELDER

W-88

Technical Questions Answered

BY CHARLES K. FRANCIS, PH.D., TECHNICAL EDITOR

This department of The Oil and Gas Journal is devoted to the manufacturing branches of the oil industry.

Those connected with the refining of crude petroleum, the manufacture of natural gasoline and closely allied industries are invited to submit their problems to Dr. C. K. Francis, technical editor. The department was created for the purpose of aiding managers, superintendents, engineers, chemists and all those engaged in the various phases of plant operation; also those connected with the marketing and utilization of petroleum products.

Questions should be submitted in as much detail as possible so as to assure a satisfactory answer.

All inquiries should be signed and if other than the given initials are to be used please indicate the desired letters.

Questions involving patented processes, intricate formulas and calculations and estimates of costs, for obvious reasons, cannot be answered. The replies will appear on this page within a reasonable time.

EFFECTIVE VOLATILITY OF GASOLINE

Is it known just what is the proper relation between the first, or lighter part, and the end, or heavier part, of gasoline as shown by the distillation test, for best engine operation both for starting and long time driving conditions?—L. T. W.

While there may be some doubt as to what is the best gasoline under all conditions, including climate and different engines, we have made considerable progress in the study of the performance of gasoline. If I understand the question, it appears that some of the recent work by Professor Brown may be of assistance. The material below is from his article in The Oil and Gas Journal, March 7, 1929, page 107, Volatility in Motor Fuel Performance.

The effective volatility of a fuel is the quotient obtained by dividing the weight of fuel in the mixture delivered to the cylinders by the weight of fuel in the mixture supplied by the carburetor. As has been indicated, the effective volatility can be determined only under those conditions existing for a few seconds after the throttle has been suddenly and fully opened at low engine speed. This definition leaves mixture ratio, manifold temperature, engine speed, and the other variables to be specified.

In a few months we expect to be able to relate in a fairly satisfactory manner the effective volatility of a fuel with its A.S.T.M. distillation characteristics.

As most carburetors are adjusted to deliver an air-fuel ratio of about 12 or 12.5 under most driving conditions, and an appreciably richer mixture (about 8.5 to 10) at idling speeds, it is necessary that the fuel possess an effective volatility of not less than 45 or 60 per cent under the conditions of use if the motor is to answer its throttle with a delay of not more than four or five seconds.

If the choke is so adjusted as to supply a mixture containing less than 8 pounds of air to one of fuel, the motor will not operate satisfactorily, as this is approximately the upper limit to an explosive mixture of air and gasoline. If the fuel is less than 40 per cent effectively volatile, it is necessary that a mixture richer than this (8 to 1 air-fuel ratio) be supplied during the warming up period in order to keep the motor running when shifting gears. These facts clearly indicate that the important range, so far as warming up and obtaining satisfactory acceleration are concerned, is between 40 and 65 per cent effective volatility.

Total effective volatility is desirable for perfect distribution and performance, but 65 per cent effective volatility is essential if the car is to be driven without use of the choke, and 40 per cent effective volatility is necessary unless the driver varies the position of the choke constantly with driving conditions.

The results of a number of tests indicate that usually about 25 to 30 per cent of the fuel is carried into the cylinders in the form of liquid particles and burned therein almost as effectively as if the fuel were actually vaporized in the manifold.

The 30 per cent on the A.S.T.M. distillation is probably the most important point indicating engine performance during the warming up period or in cold weather.

When using the choke for driving as in extremely cold weather, still richer mixtures may be supplied and lower partial volatility required. Under these conditions the 10 to 20 per cent range on the A.S.T.M. distillation appears to be the most important in indicating throttle response or acceleration.

Reasoning in the same manner, the 60 to 70 per cent range on the A.S.T.M. distillation would probably be the most important part indicating engine performance when the motor is thoroughly warmed up. Without going into further detail, it might be well to indicate that these conclusions may also be derived from the experimental data reported by D. B. Brooks, see Relation of Fuel to Engine Acceleration, Bulletin of the American Petroleum Institute, 10, page 141, January 3, 1929.

SALT IN CRUDE AND FUEL OIL

Large quantities of white crystalline material collects in our crude tanks and also in the fuel oil tanks. We have to take down the crude exchangers for cleaning very often because of deposits of the same kind of material. This appears mostly salt and I would like to know what can be used to dissolve such deposits and keep them from forming in the tanks.—S. G. F.

Most crude oil contains small quantities of salt, sodium chloride being present in the largest quantity, because of the traces of water that are delivered with the oil. This salt accumulates in the storage tanks when the crude oil is permitted to remain long enough for the settling; also, salt deposits become concentrated in the residue from the stills, such as fuel oil. Any unusual accumulation in the exchangers would appear to indicate that a dirty oil is being run and this should be determined by means of the A.S.T.M. tests for sediment and water.

The best way to prevent deposits of this character is to keep the salt out of the system and if conditions are such that you cannot control this in the crude deliveries is to carry an excess of water in the crude tanks.

Salt, sodium chloride, is readily soluble in water. There is but little difference in the rate of solubility in hot and cold water, as water at the boiling point will dissolve 39 per cent and 35.7 per cent at close to the freezing point. Salt is not soluble to any extent in oil.

It is thought that an examination of the salt water from your tanks will disclose the fact that the water is saturated with salt, or the quantity of salt present is very nearly enough to form a saturated solution. Should this be true, a very small quantity of cold water added to the tank will be enough to keep the salt in solution.

The quantity of water necessary and the length of time required may be determined by experiment. A known volume of the salt water should be diluted with measured quantities of water and then note the time required for crystals to form about the edge of the vessel. A plate or saucer may be used for this purpose. Check this test by testing a sample of the water, direct from the tank, under similar conditions.

In some districts the refiner washes and pretreats the crude oil for the purpose of removing water, salt and other objectionable substances. Fresh water is run into the crude tanks at intervals as the conditions may require. The water that has been standing in the tank of course being drawn off before the fresh water is run in. If good rain water is not available, you should use good surface water for this purpose.

FORMULA FOR CALCULATING RELIEF VALVE AREA

What is the method used for calculating the number and size of relief valves which are required on a gasoline storage tank? I want to get some rule of this kind including all grades of gasoline and a wide range in temperature conditions.—C. W.

You will find many suggestions pertaining to the storage of gasoline in the article Trends in Natural Gasoline Storage, by G. M. Davidson, The Oil and Gas Journal, May 23, 1929, page 92. In this article a reference is made to a publication of the United States Bureau of Explosives and this is given in the quoted form below.

The Bureau of Explosives through John F. Fetterly has published a bulletin entitled, "The Determination of the Relief Dimensions for Safety Valves on Containers in Which Liquefied Gas is Charged and Where the Exterior Surface of the Container is Exposed to a Temperature of 1,200 Degrees Fahrenheit."

This formula is given for uninsulated containers as

$$A = \frac{[(B \times 3.1416 \times U) + 2E]}{L \times P \times 50} \times C \times (t_1 - t_2) \sqrt{\frac{W_2}{W_1}}$$

A=Relief area of the safety valve.

D×3.1416×N×Sine valve seat angle.

B=Outside diameter of the container in feet.

E=End area of the tank.

U=Length of the container in feet.

C=Heat transfer in B.t.u. per square foot per hour per degree Fahrenheit temperature difference between 1,200 degrees Fahrenheit and the temperature of the container contents when at the pressure at which the safety valve is set to open.

$$C = \frac{t_1 - t_2}{A}$$

t_1=Temperature in degrees Fahrenheit at outside of container.

t_2=Temperature in degrees Fahrenheit of contents of the container when at the pressure at which the valve is set to open.

W_2=Density of steam in pounds per cubic foot at relief pressure.

W_1=Density of vapors in pounds per cubic foot at relief pressure.

W=The latent heat of vaporization.

SULPHUR COMPOUNDS IN MID-CONTINENT CRUDE

Can you refer me to some journal or book where I will find a complete list of the different kinds of sulphur substances that are found in the different Mid-Continent crude oils?—D. E. R.

The various kinds of sulphur compounds that are found in petroleum have been discussed at different times on this page and the observation has been made that so little is known about these compounds that it would be impossible to say just what sulphur compounds may be found in an oil. We have evidence that moisture, heat, and air, tend to convert one class of sulphur compounds into a series of substances that may have properties quite different from those of the original compound. Changes of this character are commonly observed while the crude oil is passing through the stills and the resulting petroleum products are being purified in the refinery. Deposits of free sulphur are sometimes noticed but these cannot justify the conclusion that this free sulphur was present in the crude oil; in fact, there is ample evidence that such deposits originate in the decomposition of sulphur compounds.

There is a discussion of the various forms in which sulphur is found in petroleum in the book, Petroleum and Its Products, by Gruse, page 50. Many references to the original literature are given. He states: "In the case of Persian crude oil, free sulphur appears during distillation when the oil reaches a temperature of 120 degrees Centigrade. The presence of free sulphur and hydrogen sulphide equivalent to 0.4 per cent of sulphur is reported in a Gulf Coastal oil. Much hydrogen sulphide is produced during the distillation of high sulphur crude oils, particularly with the upper fractions and probably from decomposition reactions." It seems that the sulphur concentrates in the residue.

"No complete investigation of the sulphur compounds in any one crude oil has been made. The studies have been more or less haphazard. In some cases, as for the mercaptans, the compounds have not been isolated in quantity, and evidence of their presence is often indirect. Among the compounds to be expected would be mercaptans, alkyl, sulphides and disulphides, and possibly thiophene and its higher derivatives. The presence of mercaptans in crude oils does not seem likely when the instability of these compounds and the rather severe conditions of underground storage are considered. Their presence has been established in distillates and spent alkali wash liquors. The ethyl, isopropyl and isobutyl mercaptans were identified. The process of refining distillates known as "sweetening" is ultimately connected with the presence of mercaptans. In some cases sweetening involves partial desulphurization, and always more or less complete conversion of mercaptans into less offensive compounds. Alkyl sulphides, ranging from dimethyl to dihexyl sulphide have been isolated by Mayberry from the acid tars . . . . . and from the distillates." Much additional information on the subject may be obtained by consulting this reference. The concluding paragraph states that "It will be clear that the nature of the sulphur compounds in petroleum is to a great extent unknown. Marcusson has expressed the opinion that much of the sulphur in petroleum is probably combined in the resinous and asphaltic portions, as a member of ring structures, or in the form of ethers; this view agrees to some extent with the fact that sulphur tends to accumulate in the heavy fractions, and that many asphalts are high in sulphur content."

PACKERS THAT PACK

913-D

OIL WELL S

WORLD'S OLDEST AND LARGEST
MANUFACTURERS OF OIL FIELD EQUIPMENT

PITTS

IT'S FROM "OILWELL"

Dove-tail Hinged Slips prevent fouling when pulling the packer. Tapered Hooks assure positive hooking of the cage when resetting the packer. Sectional Rubber Rings expand over the full length with less weight, assuring complete shut-off when set. These are some of the patented features of "Oilwell" packers that make them "Packers that Pack!". . . Available in all styles and sizes.

UPPLY CO.

BURGH, U.S.A.

BRANCH STORES
IN ALL OIL FIELDS

EQUIPMENT AND SUPPLIES

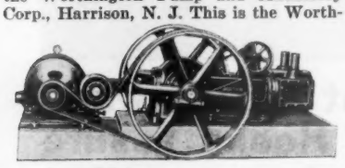
BRYON JACKSON MAKING A NEW ELEVATOR LINK

The BJ weldless link, manufactured by the Byron Jackson Co., Los Angeles, Calif., is said by the manufacturers to increase the safety factor of drilling operations and to increase efficiency when running in or pulling out of the hole through easier and faster handling.

The BJ weldless link is drop-forged from a billet of special high-grade alloy steel, and properly heat-treated to insure those qualities essential to maximum strength. There are no welds. The eye sections of the link are Y shaped, which effects a straighter pull with the grain of the metal, and minimizes the possibility of fracture at these points. The single section, or shank, is proportioned to the metal in the eyes, as shown by the illustration. Reduction of the area of the eyes to a minimum materially stiffens the construction of the link. The patented BJ bend at the lower end of the link provides greater freedom for the elevator, latch and door, while conveniently placed hand-holds permit easier handling of the elevator when running in or pulling out. BJ weldless links are made in 2¾-inch by 72-inch and longer sizes, and can be used on all types of elevators.

COMPRESSORS EQUIPPED WITH TIMKEN BEARINGS

A new line of compressors, employing Timken roller bearings on the main crank shaft journals, has been announced by the Worthington Pump and Machinery Corp., Harrison, N. J. This is the Worthington single horizontal straight line series. Capacities range from 100 to 300 cubic feet per minute and, operating at moderate speeds, maintenance charges and attention are said to be reduced.



As compressors of this type and capacity usually are used by the smaller power plants, many of which do not have skilled operators, the elimination of bearing adjustments removes an item of worry and expense.

Oil rings, which deflect the surplus oil and return it to the crankcase, are mounted on the shaft beyond the Timken bearings. The crankcase enclosure is free from oil leaks.

"Feather valves" are standard equipment on these machines, as they are on all Worthington air and gas compressors. These valves are light strips of steel, approximately 1-32-inch thick, which flex when opening against a curved guard to permit the passage of air.

An automatic starter and pressure switch are mounted on the motor, stopping and starting it to control the air pressure between definite limits. Or a pressure regulator may be attached to the compressor inlet valves, holding them open to maintain constant air pressure.

VENTURI VALVES NOW ON PRODUCTION BASIS

The Merco Nordstrom Valve Co. is on production with Venturi valves, of the plug cock type, recommended as especially desirable in the handling of gas. The Nordstrom principle of pressure lubrication, in which the plug is jacked up by hydraulic pressure of the lubricant while

the lubricant seals and lubricates the ground surfaces, has made plug cocks available in sizes up to 30 inches.

The manufacturers say that by making use of the Venturi principle of static head recovery, the larger sizes of plug cocks may be made advantageously with reduced cross sectional port area and still retain high efficiency. The valves are built with an opening through the plug equal to 40 per cent of the nominal area of the pipe line in which the plug is installed. The interior is stream-lined so far as practicable, with the result that from 60 per cent to 70 per cent of the pressure-head normally lost over a construction of this size, is recovered.

The valve is compact, allowing it to be installed in places where economy of space is important, as in governor pits, etc. Is is easy to operate because of the small area of surface in contact, as well as the small area of the plug exposed to the line pressure. Little lubrication is required to keep these valves in working condition because of the relatively small capacity of the lubricating ducts.

This company has prepared a series of pressure drop charts showing the pressure drops incurred in the different sizes of the Venturi valves for various fluids and conditions of line flow, particularly for gas under a wide range of pressures. These charts are available for engineers interested.

FLOW HEAD DESIGNED FOR AIR OR GAS LIFT

The Hercules flow head, manufactured by the Hercules Tool Co., Tulsa, was especially designed for air or gas lift. It is simple and compact in design, making it easy to install, and, although constructed for flowing wells it is used as a casing-head after the well is put on the pump.

The body (casinghead "T" or "Y" type) is made of electric steel casting and the top section or packing bowl is made of forged steel, making the flow head an exceptionally strong and serviceable device.

It is tested for a working pressure of better than 3,000 pounds and to support a hanging weight of more than 300,000 pounds.

The flow head body has a regular casinghead top with set screws so that in case it is desired to run tools into the well an oil saver may be used. In order to do this the top section (flow head packing bowl) must be unscrewed and removed from the flow head body.

OLD ESTABLISHED CHAIN WORKS CHANGES OWNERS

Negotiations have been completed by the Newhall Chain Forge and Iron Co., 9 to 15 Park Place, New York, for the purchase of the chain shop and other buildings of the Rochester Chain Works, Rensselaer, N. Y., near Troy, an old established chain manufacturing plant, together with adjoining properties, to permit extensions.

The Rensselaer Chain Works is equipped particularly for the manufacture of hand-made, heavy-duty chains, and has been under the exclusive operation of the Newhall company for years. The Newhall Chain Forge & Iron Co. is one of the divisions of the Henry B. Newhall Corp., the main office and factories being at Garwood, N. J. Other divisions are: the Diamond Expansion Bolt Co., manufacturers of Diamond expansion bolts and other pole line and electric material, and the New Jersey Foundry & Machine Co., manufacturers of "Delta" cranes and overhead conveying systems.

TRADE LITERATURE RECEIVED

Two new bulletins have been prepared by the International Nickel Co., New York. "An Introduction to Nickel Cast Iron," is a brief discussion of the position of cast iron in the engineering field, the trend toward improvements in physical and mechanical properties and the role of alloys in this connection. "Properties and Applications of Nickel and Nickel-Chromium Cast Iron" supersedes bulletin No. 201 under this title. It includes more than 25 important applications of Nickel cast iron.

"Axiflo, Hiflo and Coniflo Deep Well Pumps," is the title of a bulletin issued by the Worthington Pump and Machinery Corp., Harrison, N. J.. Comprising 24 pages, illustrated, the booklet describes the construction and application of each of these three types of pumps. Tables on flow of water through pipes, horse power required, etc., are included.

The new contact sulphuric acid process perfected by the Selden Co., Pittsburgh, Pa., manufacturer of chemicals, is described and illustrated in a 16-page booklet issued by the company. The new process is based primarily on the inventions of the technical director of the Selden Co., Dr. A. O. Jaeger.

"Lubrication of Modern Reciprocating Steam Engines" and "Combating Corrosive Gases and Fumes" are among interesting articles in the August number of Houghton's Black and White, published by E. F. Houghton & Co., Philadelphia, Pa.

The Delta Star Electric Co., Chicago, is sending out a bulletin on Sumpter compression type connectors for wire connections and Sumpter compression type lugs.

The Elesco Multiple-loop, Single-pass superheater is the subject of a bulletin issued by the Superheater Co., New York. It illustrates how the same basic principle applies to all Elesco superheaters for stationary boilers.

Articles of interest to the paint trade are contained in the Dutch Boy Quarterly, the current number of which is being distributed by the publisher, the National Lead Co., New York.

FOUR WHEEL DRIVE NOW IN ITS TWENTIETH YEAR

The Four Wheel Drive Auto Co., Clintonville, Wis., has completed its nineteenth year manufacturing FWD trucks. The company began business on July 14, 1910, in a little machine shop containing one lathe, one planer, one drill press and

C. S. Thomson

a few hand tools. Here the first car was completed. A year later the company had eight and one-half acres of land, and a solid brick building 60 by 120 feet. The original capitalization of $110,000 was increased in 1911 to $250,000. The capitalization of the company has grown out of its earnings from $250,000 to $1,500,000.

On August 3, C. S. Thomson, manager of the foreign sales department, will sail from New York to Rio de Janeiro to attend the Pan American Road Congress. After that Mr. Thomson plans to call on all the FWD dealers in the South American countries and assist them in promoting FWD sales.

BUSINESS NOTES

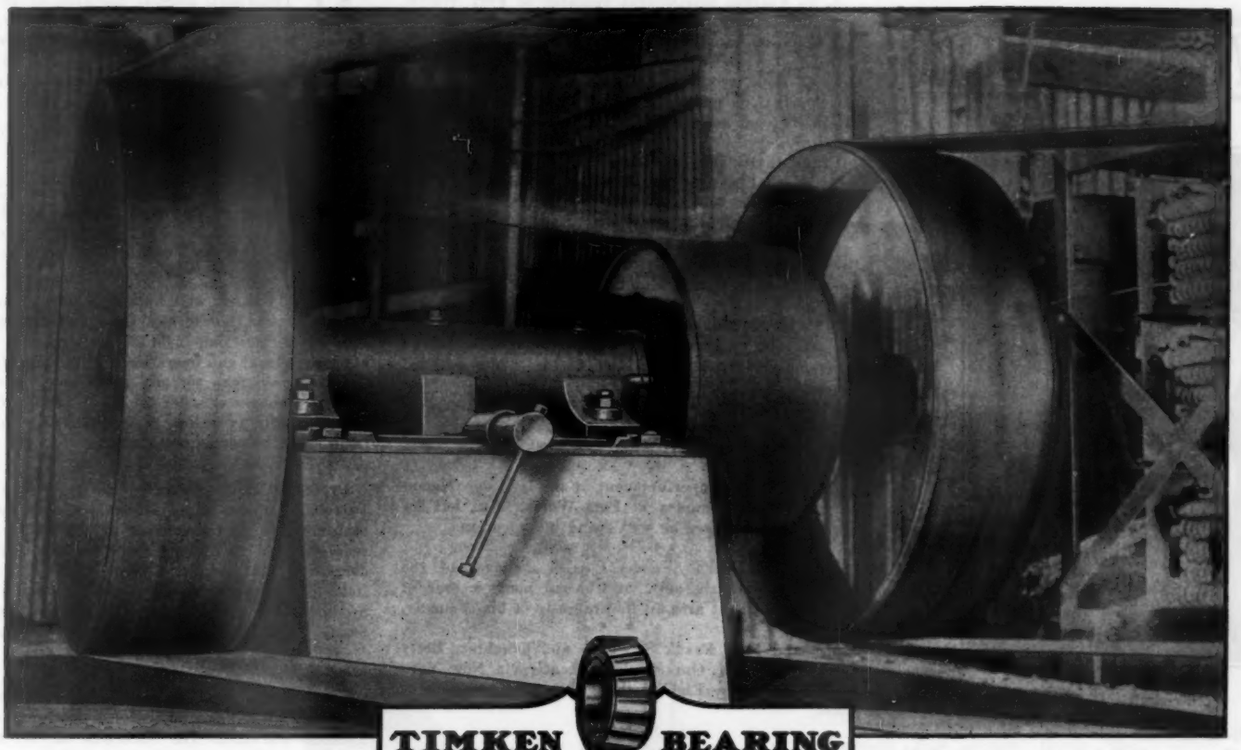
The Wagner Electric Corp., St. Louis, Mo., announces the addition of W. H. Kretz to its transformer sales division. Mr. Kretz will travel the southwest.

G. W. Foote has been appointed factory manager of the Perfex Corp., Milwaukee, Wis., maker of heavy-duty industrial engine-cooling radiators, D. T. MacLeod, president of the company, announces.

Ballard-Davis, Inc., joint distributors with the Union Carbide Sales Co. of the UCC combustible gas indicator, announce that the indicator is in full production and immediate deliveries are assured.

CHANGE SIMPLIFIES SALES

The Fusion Welding Corp., a subsidiary of the Chicago Steel & Wire Co., 103d Street and Torrence Avenue, Chicago, has taken over the sale of all welding rod manufactured by the parent company. The change provides one source of supply for both Weldite welding rods and Fuzon welding equipment and accessories previously sold by the two companies. The Fusion Welding Corp. is owned outright by the Chicago Steel & Wire Co.



Medart Countershaft In 8,525 Foot Well Test!

Here is a remarkable performance record established by a Medart Timken-equipped oil-well countershaft.

To quote the manufacturer:—

"It was made on a deep well test carried out by the Big Lake Oil Company of Texon, Texas, the hole being 8,525 feet deep, starting with a 22 inch casing and finishing with 6⅝ inch casing.

"Despite the severity of the loads and shocks encountered in drilling this well, the Medart Timken-equipped heavy duty countershaft never turned a hair from start to finish."

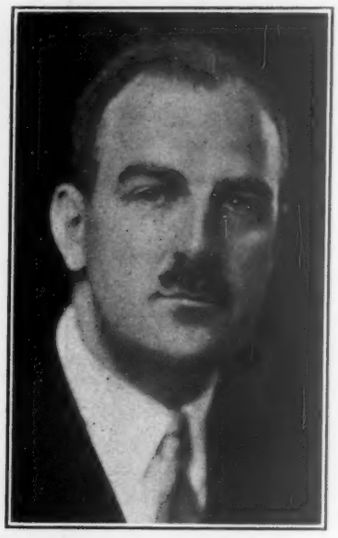
The Medart Company gives full credit to Timken Bearings which, by minimizing friction and safely carrying all radial, thrust and resultant loads, helped to make this great achievement possible.

And the exclusive combination of Timken tapered construction, . . . Timken *POSITIVELY ALIGNED ROLLS* . . . and Timken steel are perpetuating this unmatched Timken service in all types of oil field equipment.

THE TIMKEN ROLLER BEARING COMPANY, CANTON, OHIO

TIMKEN *Tapered Roller* **BEARINGS**

MEN KNOWN IN OILDOM



Frederick Godber

Frederick Godber, a director of the Shell Transport and Trading Company, Ltd., has risen steadily in the ranks of the Shell group since he entered its service as a junior clerk in the accounts department of the Asiatic Petroleum Company, London, England, in 1904. A year later he was made assistant to G. S. Engle, and from 1907 to 1909 he worked in the oil accounts department and the steamers department. He next served under J. Y. Kennedy, then secretary of the company.

From 1912 to 1919 Mr. Godber gained a valuable insight into the American side of the business and he came into personal contact with Sir Henri Deterding. In 1919 he took a marked upward step, for in that year he came to the United States to become vice president of the Roxana Petroleum Corporation, then the Shell's representative in Oklahoma. Two years later Mr. Godber succeeded Mr. van der Gracht as president. At the end of 1928 he returned to London as a director of the Shell Transport and Trading Company.

When Mr. Godber assumed the presidency of Roxana in 1921 the crude oil production of that company, its subsidiary and affiliated companies, was 12,500 barrels daily. In 1928 this production had grown to 100,500 barrels.

PERSONAL PARAGRAPHS

R. G. (Bob) Estes, well-known drilling superintendent, is now in Calgary, Alberta.

* * *

J. R. Lackland was recently appointed assistant credit manager of the Union Oil Company of California.

* * *

Arthur Johnson of Denver, president of Argo Oil Company, spent several days in Casper, Wyo., recently.

* * *

Mr. and Mrs. D. W. Matheson and children left Petrolia, Ontario, recently via New York for the Colombian Fields.

* * *

J. Ervin Hupp of Denver, member of the geological staff of Midwest Refining Company, was in Casper, Wyo., recently.

* * *

O. E. Bransky, superintendent of the Whiting, Ind., refineries of the Standard Oil Company of Indiana, addressed the Muskegon, Mich., Rotary club recently on the petroleum industry in general and more particularly the Whiting refinery of which slides were shown with the talk.

J. E. Farrell, independent operator of Fort Worth, Tex., and family, are spending several weeks in Denver, Colo., on vacation.

* * *

C. C. Pope, scout for the Sun Oil Company at San Angelo, Tex., is making a trip to Oklahoma on his vacation, to visit relatives.

* * *

Frank L. Ring of the Ring Petroleum Company has returned to Los Angeles following a pleasant vacation spent in Walla Walla, Wash.

* * *

R. J. Metcalfe, district geologist for the Transcontinental Oil Company, Fort Worth, Tex., and family, are spending a vacation in Colorado.

* * *

A. M. McQueen, vice president of Imperial Oil, Ltd., has returned to Toronto after inspecting the company's operations in the Turner Valley Field.

* * *

Frank McCue, of Washington, Pa., retired foreman of the South West Pennsylvania Pipe Line Company, was a Pittsburgh, Pa., visitor last week.

* * *

D. O. Bayless, superintendent of the land department for The Texas Company at Fort Worth, Tex., left for Denver, Colo., where he will spend his vacation.

* * *

Harlow A. Varney, general sales manager of the Moon Manufacturing Co., of Chicago made a tour of the Mid-Continent area in the interests of his company.

* * *

Mr. and Mrs. Frank S. Smith and daughter, Betty Jean, of Petrolia, Ontario, left recently via New York for the Colombia Fields, where they will spend three years.

* * *

W. E. Livingston, Parkersburg, W. Va., superintendent of the tankage department of the South Penn Oil Company, spent several days at the home office in Pittsburgh, Pa., last week.

* * *

H. Paul Grimm, for the past six years vice president and general manager of the George F. Getty Oil Company, has resigned from that company, effective August 1.

* * *

Romayne Baker, of Abilene, Tex., an active oil operator of West Texas, has been in Tulsa during which time he was the guest of Joseph R. McGraw, director of the Exchange National Bank.

* * *

R. S. Ellison, George H. Jaques, and Harry Bossart, officials of the Midwest Refining Company, have recently completed a trip of inspection of properties in western Wyoming and Montana.

* * *

William Ivey, chairman of the Oil Fields of California, Ltd., was in California recently looking over the general situation but has returned to the general offices at 36 Kingsway, London, England.

* * *

Harry Good of Taft has resigned his position as deputy in the Taft office of the California State Mining Bureau to become resident geologist for San Joaquin Valley holdings of the Signal Oil & Gas Company.

* * *

Carl J. von Bibra, president of the Exeter Oil Company and interested in a number of other California companies, has returned to Los Angeles following a six months' business and pleasure trip to Europe.

* * *

Colonel F. E. Foster, recently resigned as general manager of the Sunset Pacific Oil Company to become vice president and general manager of the Golconda Petroleum Corporation, which is interested primarily in the Santa Maria district, in the northwestern part of Santa Barbara County.

* * *

L. O. Koen, vice president of the W-K-M Company, Inc., Houston, Texas, has returned to his desk after a rest of six months, spent in the western states. During his absence he visited in New Mexico, California, Nevada, Wyoming and Colorado. He has resumed active participation in the executive affairs of the company.

* * *

Sir James Henry Gunson, former mayor of Auckland, New Zealand, and a leading business man of the Antipodes, being head of the distributing company which handles all Gilmore Oil Company products in New Zealand, arrived in Los Angeles Harbor a few days ago aboard the steamer City of Honolulu.

S. P. Tschappat, general manager of the Hercules Tool Company, Tulsa, is on a business trip through the east in the interest of his company. He is accompanied by his wife and will visit his mother and other relatives in Pittsburgh, Pa., before returning to Tulsa.

* * *

Bart Myers has returned to Casper, Wyo., after four years' service in Venezuela and Colombia. Mr. Myers was formerly production superintendent for the Carter Oil Company with headquarters in the Salt Creek Field. Mr. Myers went to Venezuela for a Standard subsidiary where he remained for two years and then became resident manager of the Tropical Oil Company.

* * *

Paul P. Daniel, well known to the natural gas industry on the Pacific Coast, for several years in the Pan American Company's gas department, later manager of natural gas operations for the Pacific Western Oil Company, who recently resigned to accept a position as manager of sales for the Robinson Orifice Fitting Company, is making a survey of the Mid-Continent fields, with headquarters at Tulsa.

* * *

Professor H. C. George, director of the School of Petroleum Engineering, University of Oklahoma, has been engaged for the summer by the United States Bureau of Mines to conduct a special investigation of underground equipment and methods of production in oil fields of this country. The survey includes major oil producing areas of Oklahoma, Kansas, Arkansas, Louisiana, Texas, Wyoming, Montana and Illinois.

* * *

Harry Milton, formerly of Kentucky, is now in charge of the land division of the Dixie Oil Company at its Muskegon, Mich., headquarters in the Lyman Building. He succeeds R. F. Gibson, of Chicago, who has been directing leasing activities of the Dixie company in Michigan at intervals since the discovery well in the Muskegon Field was brought in.

* * *

Ward A. Miller, Jr., of Lima, O., general superintendent of the Illinois Pipe Line Company, was at the offices of the company in Casper, Wyo., in conference with P. W. Hennessy, superintendent of the Wyoming and Montana division. He has been joined by his father, Ward A. Miller, Sr., president of the company, who conducted a number of Utah officials over the line from Rock Springs to Salt Lake City.

* * *

Michael Shahnazorov, mechanical engineer, manager of production and utilization of natural gas for the Russian oil trust, "Azneft," with headquarters at Baku, was a visitor in Bradford, Pa., recently. Mr. Shahnazorov was the guest of the Oil Well Supply Company. He is making a trip across the continent to study ways and means of solving field problems in the oil and gas business.

* * *

The Sinclair Oil & Gas Company is closing its Wichita Falls, Tex., office, that district to be handled out of the Fort Worth office. F. K. Foster, who has been in charge at Wichita Falls and Lynn Hardin have been transferred to San Angelo, Tex., where the company is opening a district office. N. B. Larsh, geological scout, who has been stationed at Pecos City with the company, is also moving to San Angelo.

* * *

C. Max Bauer, formerly geologist for the Geological Survey and for several years with the Midwest Refining Company as chief geologist for its subsidiary Mid Northern Oil Co. and Midwest Exploration Co., has moved to Boulder, Colo. Mr. Bauer has been in Amarillo, Tex., in charge of the geological work for his companies in West Texas, the Panhandle, and western Kansas for four years. He will take graduate work in geology and geophysics at the University of Colorado.

* * *

Olaf P. Jenkins has recently been appointed chief geologist to the California State Division of Mines and Mining, and is taking charge of the newly established geologic branch of this division, which is under the supervision of Walter W. Bradley, state mineralogist. The first duties of the chief geologist are to catalog the published and unpublished material of the state, to evaluate it, to encourage further geological research, and to compile the geology of the state with the ultimate aim of constructing a geologic map of California on the scale of 1:500,000.

80% OF CRUDE PRODUCED IN ARKANSAS HAS COME FROM SMACKOVER

Approximately 80 per cent of the crude that has been produced in Arkansas has come from the Smackover field. The discovery well was Van Cleve, Kronenberg & Freedman's Richardson 1, located in section 29-15-15, Ouachita County. It came in about August 1, 1922, having penetrated 18 feet into the oil sand to a total depth of 2066 feet. The crude tested 22 degrees Baume. It was not until about three weeks later, however, that the well was completed as a steadily flowing well, at which time the initial production was given as 1000 barrels. Smackover's peak production year was 1925, during which time the output was 74,383,000 barrels. In 1928 the field produced 24,747,000 barrels, and at the end of that year the grand total of production had reached 259,878,000 barrels.

The expansion of the great plant and organization behind Hughes Tools has been thoroughly in keeping with the rapid growth and demands of the industry.

Hughes Rock Bits, Tool Joints, Drilling Valves, and Core Bits are ready for prompt shipment when new fields open up.

Sold By Supply Stores —Everywhere

HUGHES TOOL COMPANY

Service Plants
Los Angeles, Calif.
Oklahoma City, Okla.

Main Office and Plant
HOUSTON,
TEXAS

Export Office
Woolworth Bldg.
New York City

Covington, Okla.

Covington is the distributing point for the Garber oil field and the oil region which grew out of the discoveries in the Garber field back in 1917. Garber was the first field on the west side of the State.

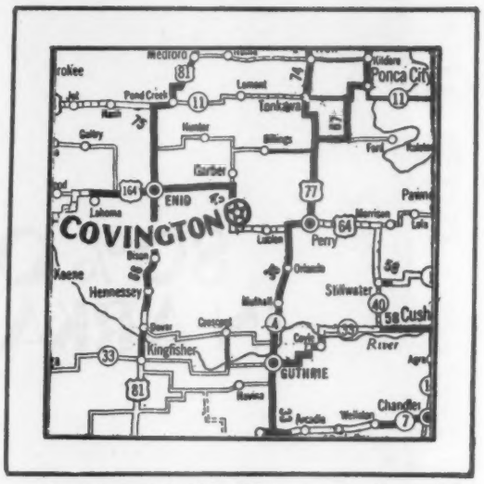
Meet
Mr. R. H. SPECK
Frick-Reid's
Store
Manager
at
Covington

It is remarkable in that it produces oil of 42 gravity and upward from sands ranging from 1,100 feet down to 4,215 feet.

Starting at 700 feet, where gas was found, with another gas sand at 800 feet, oil sands were found at approximately 1,100, 2,400, 3,100, 3,615, 4,040, 4,215 feet.

Granite was drilled into at 5,462 feet.

The peak production of the Garber field was 71,875 bbls., in November, 1925, much of this big production coming from the Siliceous Lime. One well of the Sinclair Oil & Gas Company, in



Section 18-22-3W started at 27,000 bbls. per day from the Siliceous Lime at 4,085 feet.

The Garber field has produced to June 30, 1929, a total of thirty nine million, nine hundred thousand (39,900,000) bbls.

John A. Roebling's Sons Company
Wire Lines and Welding Wire

ROSSENDALE-REDDAWAY COMPANY
"Camel Hair" and Canvas Stitched Belting

WALWORTH COMPANY
Fittings and Valves for all branches of the Oil Industry

WHITLOCK CORDAGE COMPANY
Manila Cordage, including Drilling Cables, Bull Ropes, Cat Lines, Etc.

AXELSON MACHINE COMPANY
Sucker Rods, Pull Rods, Working Barrels, Etc.

DONOVAN BOILER WORKS
Oil Country Boilers and Tanks

BEAUMONT IRON WORKS COMPANY
Dreadnaught Rotary Drilling and Pumping Equipment

FRICK-REID SERVICE RUBBER BELTING
Our Own Specifications

JONES & LAUGHLIN STEEL CORPORATION
Tubular Goods, Seamless and Lapwelded

J. P. RATIGAN
"Sure Grip" Line of Pumping Equipment

NATIONAL TRANSIT PUMP & MACHINE COMPANY
Pumps and Pipe Line Equipment

WILLIAM POWELL COMPANY
Valves for the Oil Industry

JOSEPH REID GAS ENGINE COMPANY
Two and Four Cycle Gas Engines, Pumping Powers, Refinery Equipment

FRICK-REID
SUPPLY CORPORATION

Covers the field with well managed stores from the Rocky Mountains to the Atlantic Coast.

Pittsburgh ..... Tulsa

WILDCAT OPERATIONS IN KANSAS

(Descriptions are East unless otherwise marked)

(Continued from Page 52)

GRAHAM COUNTY

Gulf Coast Oil Co.'s No. 1 Johnson, C S half Sec. 27-8-25w ..... Shut down 3,925 ft.

GREENWOOD COUNTY

F. Konkay et al's No. 1 Rock, NW NE NE Sec. 7-27-12.. Ward & McGinnis' No. 1 Anderson, NE NW SW Sec. 13-25-10 ..... Spudding.

HARPER COUNTY

Tom Slick Oil Co.'s No. 1 Unknown, SE cor. Sec. 13-34-8w ..... Drlg. 2,800 ft.
Tom Slick Oil Co.'s No. 1 Thompson, NW cor. Sec. 10-32-6w ..... Drlg. 2,415 ft.
Independent & Reserve Oil Co.'s No. 1 Moulds, C NE Sec. 7-24-1w ..... Underreaming 2,230 ft.

HARVEY COUNTY

Liggett et al's No. 1 Regier, C SE NW SE Sec. 2-23-3w.. Rig on ground.
Payne and others' No. 1 Ady, NE NW SE Sec. 16-24-1 .... Drlg. 330 ft.
Deering-Marshall's No. 1 Dick, Sec. 4-25-2w ..... Drlg. 2,550 ft.
McCulloch et al's No. 1 Prouty, NW cor. SW Sec. 3-23-1w ..... Fishing 2,020 ft.
Roth & Parrent's No. 1 Brombrowsky, NW cor. Sec. 26-22-1e ..... Fishing 2,415 ft.
Mrs. Gay et al's No. 1 Grove, C NW NE NW Sec. 29-23-1w ..... Shut down 3,102 ft.
Slick & Cornell's No. 1 Gatz, NW cor. SE Sec. 36-22-1e .. Abandoned 3,506 ft.; water.
Jolly & Ogg's No. 1 Randall, NE cor. NE Sec. 11-24-1w .. Shut down 3,444 ft.
Rosenthal et al's No. 1 Ingalls, C NW SW Sec. 24-23-3w.. Drlg. 3,324 ft.
Jolly & Ogg's No. 1 Hupp, SE cor. NE Sec. 22-23-1w .... Fishing 3,220 ft.

HODGEMAN COUNTY

Phillips Pet.'s No. 1 Hausman, NW NE Sec. 30-22-22w .. Drlg. 750 ft.

JEFFERSON COUNTY

Wichita Oil Co.'s No. 1 Simpson, NW cor. SW SW Sec. 19-10-17 ..... Rigged up and shut down.

KIOWA COUNTY

Wilcox Oil & Gas Co.'s No. 1 Woodward, NE cor. Sec. 35-27-17w ..... Drlg. 4,138 ft.
British American-M. M. Valerius, NE cor. Sec. 35-27-17w.. Location.

KINGMAN COUNTY

Gypsy Oil Co.'s No. 1 Kincaid, NE cor. NW Sec. 18-29-5w ..... Hole full water 4,417-35 ft.; shut down.

LANE COUNTY

Robinsen's No. 1 Dickerson, Sec. 11-18-27w ..... Shut down 2,650 ft.
Blankenship Pet. Co.'s No. 1 Schaeffer, NE cor. NE Sec. 24-16-28w ..... Spudded and shut down.

LYON COUNTY

Blair et al's No. 1 Martindale, C NW NE NE Sec. 27-21-11 ..... Rig.
Gordon & Stats' No. 1 Murphy, NW NE Sec. 32-21-11 .... Rig.

MARSHALL COUNTY

Irwin et al's No. 1 Cooper, NE NW Sec. 10-3-7e ..... Shut down 2,240 ft.

MARION COUNTY

Shell Pet. Corp.'s No. 1 Scully, NW NE Sec. 34-18-2e .... Drlg. 1,040 ft.
Hobworth et al's No. 1 Skiles, SE NW NW Sec. 30-21-3e.. Drlg. 2,800 ft.
General Utilities Co.'s No. 1 Propp, NE cor. SE SW Sec. 8-19-4e ..... Drlg. 1,500 ft.
Frank L. Moore's No. 1 Miller, NE cor. NE Sec. 26-19-1.. Shut down 3,364-85 ft.; water.

McPHERSON COUNTY

Lario et al's No. 1 Diener, SE SW Sec. 10-20-1w ..... Location.
Perry et al's No. 1 Wade, C SE Sec. 20-19-4w ..... Location.
E. W. Marland's No. 1 Swanson, NE SW NE Sec. 36-18-4w. Drlg. 1,410 ft.
Slick, Pryor & Lockhart's No. 1 Gratton, C NE NW NW Sec. 34-20-3w ..... Fishing 2,150 ft.
Helmerich & Payne's No. 1 Klassen, SE NE NE Sec. 14-21-1w ..... Drlg. 2,015 ft.
McPherson Oil & Gas Co.'s No. 1 Decker, C SE Sec. 11-19-2w ..... Completed 2,887-2,914 ft.; 18,000,000 ft. gas.
Helmerich & Payne's No. 1 Rosen, NE cor. SE SW Sec. 25-21-2w ..... Drlg. 3,175 ft.
McPherson Gas Co.'s No. 1 Chinberg, NW cor. Sec. 18-19-2w ..... Drlg. 2,996 ft.
McPherson O. & G. Co.'s No. 1 Rasmusson, SW cor. Sec. 8-18-3w ..... Shut down 2,445 ft.
Ted Washabaugh's No. 1 Vosshell, NE cor. NE Sec. 9-21-3w ..... Fishing 3,301-04 ft.; show of oil.
J. H. Tatlock's No. 1 Hayer, C SW NE Sec. 32-20-1w .. Drlg. 3,195 ft.

MORTON COUNTY

White & Cheney's No. 1 Unknown, NE cor. Sec. 11-34-42w ..... Rig on ground.

NORRIS COUNTY

Hiatt et al's No. 1 Blythe, NW NE Sec. 15-5e ..... Abandoned 2,380 ft.

NESS COUNTY

E. W. Marland, Inc.'s No. 1 Moses, NE SE Sec. 7-18-25w.. Drlg. 2,750 ft.
Barnsdall Oil Co.'s No. 1 Lauk, C SW Sec. 35-18-21w .. Drlg. 4,614 ft.

OSAGE COUNTY

Goebel-Bending's No. 1 Bartee, C SW SW Sec. 28-17-15.. Shut down 1,190 ft.

OSBORNE COUNTY

Phillips Pet. Co.'s No. 1 Greive, NW SE NE Sec. 6-7-12w.. Drlg. 835 ft.
Mid-Kansas' No. 1 Boyce, SE cor. NW Sec. 18-6-13w .. Drlg. 855 ft.
Trees Oil Co.'s No. 1 Payenter, NE cor. SE SE Sec. 22-6-15 ..... Shut down 3,100 ft.
S. D. Jarvis' No. 1 Jellison, SE cor. SE Sec. 13-10-15w.. Fishing 3,577 ft.

PAWNEE COUNTY

F. C. Troupe's No. 1 Lovett, CEL NE NE Sec. 31-21-16w. Shut down 1,560 ft.

PHILLIPS COUNTY

Watsonian-British American's No. 1 Wellman, C SW SW Sec. 34-2-19w ..... Drlg. 3,245 ft.
O'Haver & Jones' No. 1 Lunt, C SW NW Sec. 15-28-14w.. Drlg. 2,780 ft.

PRATT COUNTY

RENO COUNTY

Empire O. & R. Co.'s No. 1 Henderson, SW cor. Sec. 35-25-4w ..... Drlg. 3,930 ft.
Skelly Oil Co.'s No. 1 Birkett, NE SW Sec. 30-24-7w .... Drlg. 2,035 ft.
Milmar Oil Co.'s No. 1 Strickley, SW cor. SW Sec. 17-26-5w ..... Drlg. 3,400 ft.

RICE COUNTY

Milmac's No. 1 Cain, C SE Sec. 29-19-7w ..... Rig on ground.
Allison & Fitzwilliams' No. 1 Poland, NE cor. SW NE Sec. 36-19-8w ..... Cellar.
Higgins & Steinbuchel's No. 1 Shurr, NE cor. SW Sec. 21-20-10w ..... Shut down 3,085 ft.; water.

RILEY COUNTY

Grey et al's No. 1 Smith, NE SE Sec. 30-6-6 ..... Drlg. 1,200 ft.
Derby & Shaw's No. 1 Lindstrom, NE cor. Sec. 32-7-5e .. Drlg. 945 ft.

RUSSELL COUNTY

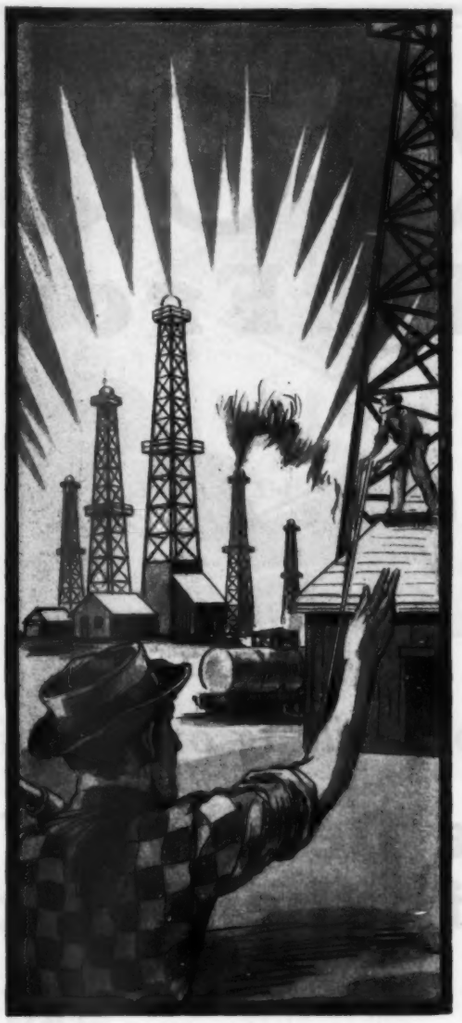
Empire and Prairie's No. 1 Bocks, C SE NE NE Sec. 23-15-14w ..... Rig.
Allison & Fitzwilliams' No. 1 Mohenny, NW SE Sec. 5-14-12w ..... Underreaming 3,218 ft.

ROOKS COUNTY

Kruger et al's No. 1 Stels, NW SE SW Sec. 12-9-16w .. Shut down 50 ft.
Burford-Brim's No. 1 Toxa, Sec. 22-9-17w ..... Spudded; shut down.
Prairie O. & G. Co.'s No. 1 Gick, SE cor. Sec. 22-9-19w .. Drlg. 4,050 ft.

RUSH COUNTY

Sinclair Oil & Gas Co.'s No. 1 Seur, C SW NW NW Sec. 8-18-17w ..... Drlg. 3,619 ft.
Danciger Oil Ref. Co.'s No. 1 Swindt, SW cor. Sec. 22-17-17w ..... Fishing tools 3,675 ft.
Barnsdall Oil Co.'s No. 1 Brock, C SE SE Sec. 21-17-17w ..... Granite 3,595-3,604 ft.; abandoned.
Central Commercial Oil Co.'s No. 1 Brock, SE cor. SW SW Sec. 12-17-16w ..... Shut down 50 ft.



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A broken bit may mean expensive fishing—loss of time—labor and money.

But these problems are made less costly with ASCO Well Bit Tool Steel.

A bit made from ASCO Well Bit Tool Steel will challenge the toughest of rock formations—eat its way thru by steady drilling.

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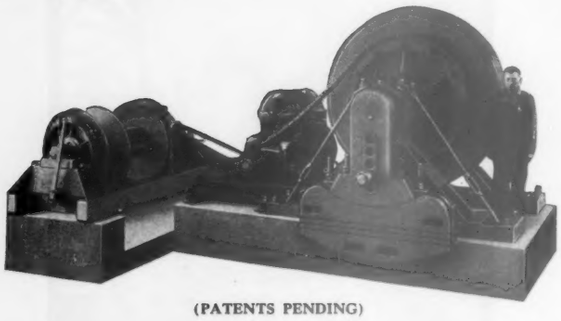
THE ANDREWS STEEL CO.
NEWPORT ASCO KENTUCKY

OCS
Rig Fronts



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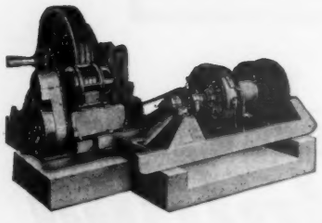
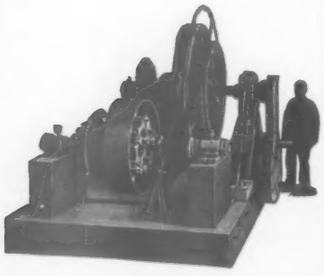
The Deepest Wells in the World



85E
With Triple Tug
AND
The O. C. S.
CHAIN DRIVE
SAND REEL

For Gas, Oil or Steam Engines
85C
WITH
The O. C. S.
Countershaft
Reversing
Clutch



Manufactured by

THE OIL COUNTRY SPECIALTIES MFG. CO.
COFFEYVILLE, KANSAS
TULSA, OKLAHOMA
SWEETWATER, TEXAS HYNES, CALIFORNIA

Danciger Oil Ref. Co.'s No. 1 Pivonka, NE cor. SW NE Sec. 17-19-17w ..... Drlg. 3,575 ft.

SALINE COUNTY

Austin et al's No. 1 Olsen, NW SW SE Sec. 10-15-4w .. Spudding.
Templeman's No. 1 Lanbengager, C SW Sec. 20-15-5w .. Drlg. 1,050 ft.
Kinney-Coastal's No. 1 Hughes, NW NE NW Sec. 20-13-4w ..... Shut down 50 ft.
Dixie Oil Co.'s No. 1 Muir, C SW SE Sec. 6-15-2w ..... Drlg. 3,110 ft.
Boyle et al's No. 1 Miller, SW cor. SE Sec. 21-16-1w .... 5-in. csg. 3,250 ft.
Kenney-Coastal Oil Co.'s No. 1 Beal, C NW Sec. 23-14-5w ..... Drlg. 4,005 ft.

SEDGWICK COUNTY

C. B. Davis' No. 1 Kinkead, NE cor. Sec. 14-27-1 ..... Spudding.
Marland and Amerada's No. 1 Sensroth, NW cor. Sec. 25-28-4w ..... Rig.
Boyle's No. 1 Sandusky, NW NE SE Sec. 34-26-1w .... Drlg. 400 ft.
Lario O. & G. Co.'s No. 1 Calkins, SW cor. SE Sec. 7-27-2e ..... Drlg. 2,055 ft.
E. W. Marland's No. 1 Huggins, SE NW SW Sec. 30-27-2 ..... Shut down 1,440 ft.
Johnson & Marshall's No. 1 Roy, NE cor. SE SW Sec. 23-29-1w ..... Drlg. 2,645 ft.
Lario O. & G. Co.'s No. 1 Teachorff, NE cor. SW Sec. 27-29-1w ..... Drlg. 2,150 ft.
Kyle et al's No. 1 Pinney, SW NW SE Sec. 29-28-1w .... Shut down 50 ft.
Simmons & Canary's No. 1 Scott, NE NW NE Sec. 22-26-1e ..... Drlg. 3,055 ft.
T. B. Slick's No. 1 Rosenhagen, SW SE NE Sec. 33-27-4w ..... Drlg. 4,181-91 ft.; water.
Hammond & Stout's No. 1 Roeder, SW NW Sec. 23-27-2w ..... Drlg. 3,340 ft.
Twist et al's No. 1 Armstrong, NE NW Sec. 28-26-1e ... Rig; spud.; shut down.
Shawver et al's No. 1 Scott, SE cor. SW SW Sec. 10-28-1e ..... Drlg. 3,285 ft.
Barnett O. & G. Co.'s No. 1 Davidson, NW cor. NW SW Sec. 27-26-1e ..... Shut down 2,668 ft.
Kellar & Lewis' No. 1 Buckles, NW cor. SE Sec. 3-28-1w .. Fishing 975 ft.
Twist et al's No. 1 Joseph, CNL SW SE Sec. 4-25-1w .... Shut down 1,980 ft.
Miller Wentz' No. 1 Shaffer, NE cor. NW Sec. 9-27-2w .... Drlg. 3,565 ft.
Kroder et al's No. 1 Harden, SW cor. NW SW Sec. 20-26-1e ..... Abandoned 1,100 ft.
Washabaugh et al's No. 1 Harrison, NW cor. NE NE Sec. 3-26-2w ..... Drlg. 2,225 ft.
Sullivan et al's No. 1 Shelly, NW cor. NE SE Sec. 32-29-2e ..... Drlg. 3,608 ft.
Producers Oil Co.'s No. 1 Jones, SW cor. NE SE Sec. 31-26-2 ..... Hole full water 3,357-75 ft.; total depth 3,640 ft.; abandoned.
LaFont et al's No. 1 Carlton, C SE SE SW Sec. 24-28-1e .. Shut down 1,685 ft.

SHERMAN COUNTY

A. L. Henson et al's No. 1 Murry, NE cor. SE NW Sec. 22-7-40w ..... Shut down 3,035 ft.

STEVENS COUNTY

Trees Oil Co.'s No. 1 Thompson, C NE SW Sec. 3-35-38w .. Shut down 500 ft.
W. Sidwell et al's No. 1 Kelly, SW cor. NE Sec. 16-34-38w ..... Shut down 1,320 ft.

SMITH COUNTY

Phillips Pet.'s No. 1 Clydesdale, SE NW Sec. 23-5-14w .... Drlg. 1,300 ft.

SUMNER COUNTY

E. K. Cary and Lorado Oil Co.'s No. 1 Walsch, SW SE Sec. 9-34-1e ..... Skid rig; drlg. 400 ft.; new hole.
Mid-Continent Pet. Corp.'s No. 1 Clark, SE cor. Sec. 31-34-3w ..... Drlg. 1,015 ft.
Shell Pet. Corp.'s No. 1 Armstrong, NE cor. Sec. 12-33-1e. Rigging up.
Gypsy & Blankenship's No. 1 Robeck, C SW SW Sec. 27-34-4w ..... Drlg. 4,681 ft.
Davidson et al's No. 1 Strickland, SW cor. SE Sec. 12-35-1w ..... Rig.

TREGO COUNTY

Mid-Kansas' No. 1 Ridgeway, NE SW Sec. 28-12-21w .... Rig.
Day et al's No. 1 Gugler, SW NE NE Sec. 36-12-21w ..... Shut down 50 ft.
Day et al's No. 1 Unknown, NE NW SW Sec. 2-11-21w .... Drlg. 1,575 ft.

WASHINGTON COUNTY

McCool & Vincent's No. 1 Linn, NW cor. NE Sec. 27-4-3 .. Drlg. 2,300 ft.

WALLACE COUNTY

Morton & Entyre's No. 1 Parker, SE cor. NW SW Sec. 20-13-41w ..... Rig.

WILDCAT OPERATIONS IN NEBRASKA

FRANKLIN COUNTY

U. R. Drlg. Co.'s No. 1 Brunkle (twin well), C NW SW NE Sec. 2-3n-13w ..... Rig.

CHASE COUNTY

Chase Pet. Co.'s No. 1 Ingold, C NE Sec. 24-6n-38w .... Total depth 4,050 ft.; cementing 6-in. csg.

FURNAS COUNTY

Southwestern Pet. Corp. of Nebraska's No. 1 Montague, SE SW SW Sec. 28-1n-22w ..... Shut down 1,510 ft.
Graham Bros.' No. 1 Edwards, NW SW Sec. 13-2n-22w .. Shut down 3,150 ft.

WEBSTER COUNTY

Mid-States Exploration Co.'s No. 1 Platt, C SE one-half Section 3-1n-11w ..... Shut down 555 ft.

WILDCAT OPERATIONS IN OKLAHOMA

(Descriptions are East and North unless marked otherwise)

(Continued from Page 50)

JACKSON COUNTY

Altus Oil Co.'s No. 1 Northington, NE cor. NE Sec. 4-1-20w ..... Shut down 2,020 ft.

KINGFISHER COUNTY

Galt Brown's No. 1 Wolf, NW SE Sec. 6-16-7w ..... Fishing 5,195 ft.
McKenna & Crawford's No. 1 Sturgeon, NE cor. SW Sec. 27-16-6w ..... Shut down 4,895 ft.

KIOWA COUNTY

Dean & Adkinson's No. 1 Kent, NW cor. Sec. 6-5-14w .. Location.
Hyde et al's No. 1 Jones, SE cor. Sec. 23-3-18w-50 ..... Shut down 375 ft.
S. H. Christian's No. 1 Stone, SE cor. Sec. 18-7-18w .... Rig on ground.
Merrick Oil Co.'s No. 1 Kelly, NW cor. SE Sec. 20-7-17w .. Shut down 1,035 ft.
McWharter and others' No. 1 Sherwood, CWL NW NE Sec. 2-5-17w ..... Drlg. 1,100 ft.

LEFLORE COUNTY

Red Bank Oil Co.'s No. 1 fee, SE SW NE Sec. 23-9-24 .. Drlg. 3,109 ft.

LATTIMER COUNTY

Limestone O. & G. Co.'s No. 1 Shaw, NW cor. NE NW Sec. 23-5-18e ..... Rig.
Limestone Oil & Gas Co.'s No. 1 McMurray, SW cor. SW Sec. 15-5-18 ..... Fishing 3,954 ft.

LINCOLN COUNTY

Phillips Pet. Co.'s No. 1 Stephens, SE cor. NW Sec. 29-12-3 ..... Rig.
Morgan & Flynn's No. 1 Finlay, SW cor. SW Sec. 19-16-6 ..... Water 4,210 ft.; Shut down 4,220 ft.

LOGAN COUNTY

Haley & Smith's No. 1 Guier, SE cor. SW Sec. 33-18-3w .. Shut down 3,970 ft.

McINTOSH COUNTY

Western Natl. Gas's No. 1 Wells, CEL SE NW Sec. 15-11-17 ..... Machine.
Holden's No. 2 Phillips, C SE SE Sec. 3-9-18e ..... Shut down 300 ft.
Spring Valley Oil Co.'s No. 1 Carr, SE cor. NE NW Sec. 16-10-13e ..... Drlg. 2,390-2,400 ft.; 1,000,000 ft. gas.

ETNA

WELDED

CASING
STANDARD PIPE
LARGE O. D. PIPE
LINE PIPE
DRIVE PIPE
DRILL PIPE

Sizes ⅛ inch to 24 inch O. D.

STANDARD

SEAMLESS

CASING
TUBING
DRILL PIPE
(Regular and Heat Treated)
LINE PIPE
STILL TUBES

Sizes 2 inch to 13⅜ inch O. D.

Since 1828

STRONG yet DUCTILE,

No matter what you consider important in pipe, Spang Pipe has it. Take strength, for example. Every length of "Etna" Welded and "Standard" Seamless Pipe is tested to withstand pressures higher than you will ever subject them in service—That means the maximum factor of safety for any emergency.

Another thing, you will like about Spang Pipe is the soft, easy working quality of the special steel—saves time and labor.

SPANG, CHALFANT & CO., INC.

General Offices: **CLARK BUILDING, PITTSBURGH, PA.**

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Welded Mills: ETNA, PENNA. SHARPSBURG, PENNA. ***Seamless Mills:*** AMBRIDGE, PENNA.

WRIGHT *forged steel* STUFFING BOX... CASING HEAD *with* SPLIT CASING RING

(Figure 1)

PATENTED
Serial Number 1,708,645

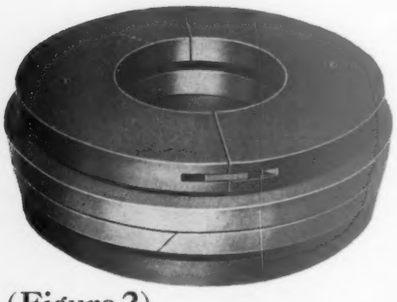
1. Body.
2. Combination split casing ring and follower.
3. Slips.

The WRIGHT HEAD *is* RIGHT

It is designed to withstand extremely high gas pressure and to support the casing in the deepest known wells today (May, 1929). The bowl is forged and turned from solid steel billet and may be built to fit any size of casing and with any desired outlet.

The combination split (2 piece) casing ring top and gland is made of very heavy steel castings, dove tailed and bolted together similar to our regular split casing ring. This member supports the inner string of casing by means of 4 forged steel slips or wedges, and the bottom of it is machined to form a gland which rests on the steel and lead packing in the bowl.

Figure 2 shows the arrangement of the lead and steel split packing rings, i.e., a split steel ring on the bottom then two split lead rings with joints overlapped, then a split steel ring on top. These split steel rings are provided with V shaped bosses to insure expansion of lead rings against the inner string of casing and the sides of the bowl. Rubber packing optional, instead of lead.



(Figure 2)

Our patented slotted link feature, used in all O.I.W. split stuffing box casing head rings, which prevents one half of ring fouling on other half, is shown in Figure 3. This cut also shows the V Boss on the steel ring.

(Figure 3)

Oklahoma

Tulsa,

...FORGED STEEL LOUISIANA
PATTERN STUFFING BOX CASING HEADS

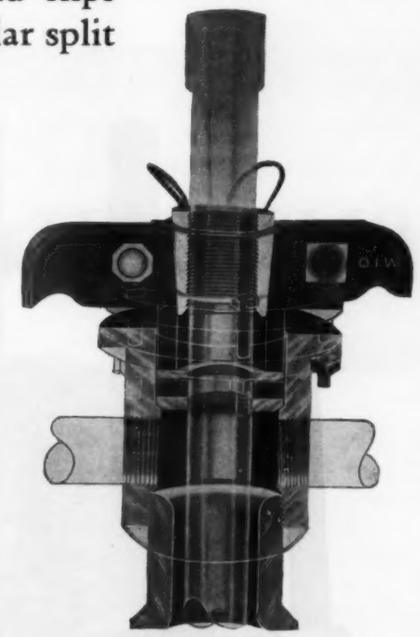
5-3/16"x3" size
(Figure 4)

15½"x9" size
(Figure 5)

These heads are regularly furnished in any size or combination of sizes with either two or four outlets. They are forged from the billet and machined accurately to size and are designed to withstand 2000 pound working pressure. The body in each particular size is sufficiently strong to support our patented split tubing ring or split casing ring and slips which takes the place of the regular split gland, as shown in Figure 7.

(Figure 6)

Patented SLOTTED LINK FEATURE in RING and DOWELED SPLIT GLAND prevents overlapping of ring under packing and facilitates assembling gland under heavy gas flow.



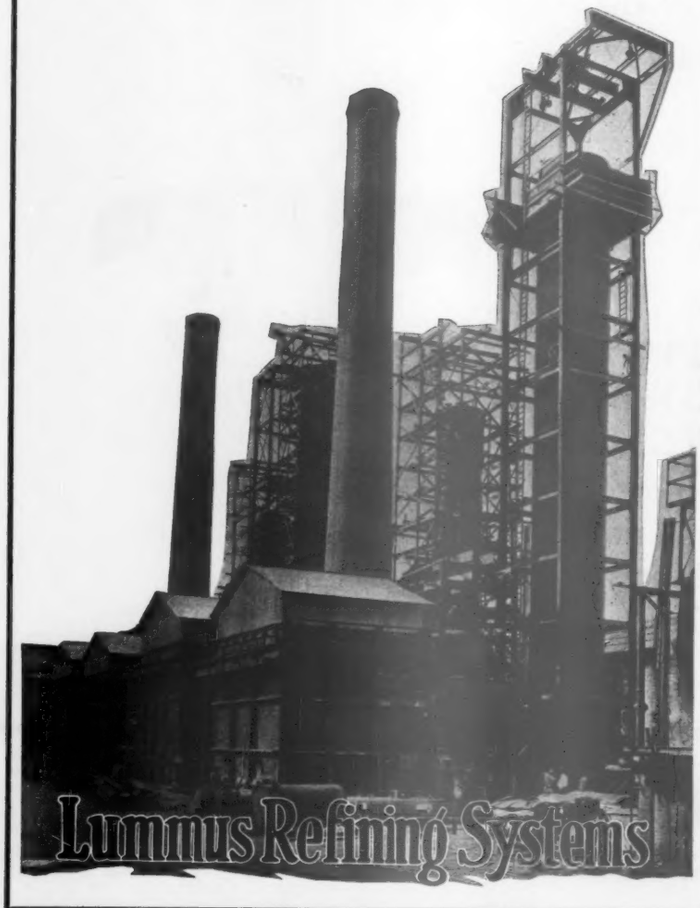
PATENTED
Serial Number 1,708,645
(Figure 7)

Iron Works
Okla.

Lummus Refinery Construction

Showing two complete pipe still units each handling 10,000 barrels crude, separating gasolene, kerosene, gas oil, pressable distillate, cylinder stock and asphalt residuum.

The Walter E. Lummus Co.
148 State Street
BOSTON, MASS.



Patterson and others' No. 1 Smith, SW cor. NW SE Sec. 32-9-16 ..... Shot 240 qts. 5,446-5,559 ft:; shot went off up hole; fishing.
Wolfe and others' No. 1 Unknown, NW cor. SE Sec. 15-12-18 ..... Rig on ground.

MAJOR COUNTY

Earl and others' No. 1 Turner, C NE NE Sec. 23-20-14w .. Rig.
Wilson and others' No. 1 Unknown, NE cor. NE Sec. 4-23-16w ..... Shut down 510 ft.

MUSKOGEE COUNTY

Sioux Oil Co.'s No. 1 Unknown, NW SE Sec. 21-11-19 ... Spudding.
Bradley's No. 1 Anderson, NW NW SW Sec. 26-15-19e ... Drlg. 1,050 ft.
Cooper-Badget's No. 1 Young, NW NE NE Sec. 7-12-20e .. Shut down 50 ft.

NOBLE COUNTY

Blackwell O. & G. Co.'s No. 1 Foster, C NE NE NW Sec. 8-22-1w ..... Drlg. 150 ft.
Gypsy Oil Co.'s No. 1 Bailey, C NE NE Sec. 24-22-1e .. Drlg. 3,100 ft.
Magnolia Petroleum's No. 1 King, C SE SW Sec. 26-20-1w. Drlg. 2,260 ft.

OKFUSKEE COUNTY

Superior and others' No. 1 Carolina, SE cor. Sec. 6-11-7e ..... Rigging up.

OKLAHOMA COUNTY

Tom Slick Oil Co.'s No. 1 Martin, C NW NW Sec. 13-13-1w ..... Drlg. 1,385 ft.
Mid-Kansas' No. 1 Trosper, NE NW Sec. 19-12-1w ..... Drlg. 5,960 ft.
Hall & Briscoe's No. 1 Holmes, NE cor. SW SE Sec. 10-11-3w ..... Shut down 4,750 ft.

PITTSBURG COUNTY

Galbreath's No. 1 Snyder, C W half SW Sec. 28-4-13 .... Shut down 100 ft.
Empire O. & R. Co.'s No. 1 Unknown, C NE SE Sec. 33-7-16e ..... Location.
Kerr & Koy's No. 1 Hall, C NW NW Sec. 32-4-12 ..... Underreaming 8-in. csg. 2,406 ft.

PONTOTOC COUNTY

Indian Territory Illuminating Oil Co.'s No. 1 McFarland, NW cor. Sec. 4-5-5 ..... Location.
Indian Territory Illuminating Oil Co.'s No. 1 Shoate, C NE SE Sec. 1-4-4 ..... Location.

POTTAWATOMIE COUNTY

Keister & Manning's No. 1 Tibbs, NE SW Sec. 9-8-4 .... Rig.
Amerada's No. 1 Vineyard, NW NE NE Sec. 15-7-3 ..... Drlg. 2,095 ft.
Gypsy Oil Co.'s No. 1 Randosh, NW NE Sec. 23-6-4 ..... Drlg. 1,800 ft.
Frank Moore's No. 1 Fundis, SE NE Sec. 19-7-3 ..... Location.
Phillips Pet. Co.'s No. 1 King, NW cor. Sec. 26-8-4 ..... Drlg. 2,650 ft.
Sinclair and Mid-Continent's No. 1 Cumings, SE NE SE Sec. 6-7-5 ..... Drlg. 4,145 ft.
Shaffer and Margay's No. 1 Murphy, NW NE Sec. 11-6-3 ..... Drlg. 3,660 ft.
Cal-Cul Oil Co.'s No. 1 McKnight, NW cor. NE NW Sec. 9-8-3 ..... Drlg. 2,600 ft.

ROGER MILLS COUNTY

Bucy & Stone's No. 1 William, C SW Sec. 23-12-24w .... Location.
L. C. Hivick's No. 1 Davis, C NW NE Sec. 4-11-26w .... Shut down 1,300 ft.

SEMINOLE COUNTY

McCullough Oil Co.'s No. 1 Luckett, NE NW Sec. 28-10-5 .. Rig.
Prairie & Slick's No. 1 Harjo, NW SW Sec. 36-6-6 ..... Rig.
Harris' No. 1 Harjocke, SE NE SE Sec. 8-6-6 ..... Rig.
Prairie's No. 1 Mingo, NW NE Sec. 25-6-6 ..... Bad hole 2,262 ft.
Continental Oil Co.'s No. 1 Proctor, SE cor. NE NE Sec. 5-8-8e ..... Abandoned 4,355-75 ft; total depth 4,386 ft.

SEQUOYAH COUNTY

Hunt and others' No. 1 Unknown, SE cor. NW SW Sec. 12-12-23 ..... Shut down 1,105 ft.
Buffington and others' No. 1 Melcher, C SW NW Sec. 31-12-24 ..... Shut down 3,000 ft.

WOODS COUNTY

Peerless O. & G. et al's No. 1 Cromwell, SW SE Sec. 14-28-16w ..... Rig.
E. K. Miller's No. 1 Copenhavers, NW cor. NW Sec. 18-24-13w ..... Rigged up and shut down.
Gypsy-Prairie and others' No. 1 Thompson, SE cor. SW Sec. 10-25-15w ..... Drlg. 5,640 ft.
Sinclair Oil & Gas Co.'s No. 1 Steward, C SW SW Sec. 33-27-16w ..... Drlg. 4,700 ft.

WOODWARD COUNTY

Farrond et al's No. 1 Unknown, SE cor. SW SE Sec. 2-23-17w ..... Shut down 1,387 ft.
Prairie Oil & Gas Co. and others' No. 1 James, NE cor. NW Sec. 23-23-17w ..... Rigging up standard tools 4,298 ft.
Billy's Oil Co.'s No. 1 Watt, C SE Sec. 9-23-20w ..... Shut down 3,813 ft.
Burgoyne Brothers' No. 1 Merkins, SW cor. SE NE Sec. 15-21-19w ..... Shut down 1,910 ft.
Wilson and others' No. 1 Unknown, NE cor. SW Sec. 4-23-16w ..... Shut down 510 ft.

NORTHERN OKLAHOMA
ATOKA COUNTY

Wapanucka Oil Co.'s No. 1 Banks, CWL SE SE Sec. 28-2s-9 ..... Abandoned 1,530 ft.

BRYAN COUNTY

Marshall et al's No. 1 fee, SE NW NW Sec. 26-5s-7 .... Drlg. 220 ft.
Wheeler & Wiley's No. 1 Pitts, NW cor. Sec. 36-6s-9e .. Drlg. 785 ft.
Yale Oil Syndicate's No. 1 Craige, C NW NE Sec. 36-9s-9e ..... Drlg. 1,640 ft.

CARTER COUNTY

L. J. Woodruff's No. 1 Zellnear, NE cor. NW SE Sec. 34-4s-1 ..... Shut down 1,855 ft.
Avon-Dickey's No. 1 Anderson, NE cor. SE NE SE Sec. 32-4s-2 ..... Shut down 420 ft.

CHOCTAW COUNTY

Choctaw Petroleum Co.'s No. 1 Wilson, SW cor. SW Sec. 15-6-9 ..... Shut down 1,346 ft.

COTTON COUNTY

Fain & McGaha's No. 1 Mason, NW SW SW Sec. 29-4-11w ..... Drlg. 2,138 ft.
Hedrick et al's No. 1 Bull, SW SE Sec. 3-15-10w ..... Abandoned 2,314 ft.
Birdwell et al's No. 1 Means, SE SW SW Sec. 24-1-11w .. Drlg. 2,535 ft.
Amerada Pet. Corp.'s No. 1 Dulaney, SE cor. NW NW Sec. 31-4-9w ..... Drlg. 3,195 ft.

JEFFERSON COUNTY

Pierce & Brown's No. 1 Fisher, SE SW Sec. 13-5s-7w .. Drlg. 1,790 ft.
J. A. Porter's No. 1 Paddock, NE NW NE Sec. 35-5s-7w .. Rig.

JOHNSTON COUNTY

Smith & Knisely's No. 1 Lane, E half Sec. 29-1-7 ..... Shut down 2,090 ft.

MARSHALL COUNTY

Neif & Sneed's No. 1 Goff, SE NE SE Sec. 21-7s-5 ..... Drlg. 825 ft.

McCURTAIN COUNTY

Utopia Pet. Co.'s No. 1 Unknown, SE NW Sec. 14-9s-25 .. Location.
Milton et al's No. 1 Vase, SW NW Sec. 26-6s-21 ..... Shut down 1,005 ft.

MURRAY COUNTY

Bison Oil Co.'s No. 1 Labor, NW cor. Sec. 17-1-2e ..... 500,000 ft. gas and show of oil 2,185-2,228 ft.; cleaning out 2,-279. ft.

STEPHENS COUNTY

Pace and others' No. 1 Woolsey, SE SW NE Sec. 4-35-6w ..... Drlg. 1,230 ft.
Leath et al's No. 1 Handley, SE SW Sec. 24-2-9w ..... Abandoned 2,503 ft.
Wirt Franklin Pet.'s No. 1 Spain, SW SE NW Sec. 9-2-5w ..... Sand 3,221-30 ft.; 510 bbls.

TILLMAN COUNTY

Cochran & Ridgway's No. 1 Barnes, C NW NE ..... Cellar.
Landfair and others' No. 1 Smith, SE SW SE Sec. 6-2s-15w ..... Shut down 2,535 ft.
Allen & Treadwell's No. 1 Howell, NW cor. SE Sec. 13-1-17w ..... Shut down 820 ft.

OKLAHOMA PANHANDLE

Magnolia Pet. Co.'s No. 1 School, C SE NE Sec. 22-5-5 .. Drlg. 4,240 ft.
Skaer's No. 1 Hitch, NW cor. Sec. 25-1-15e ..... Shut down 250 ft.

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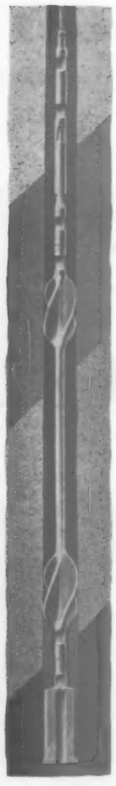

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CENTRAL WEST FIELDS

(Continued from Page 76)

Turner farm, Section 10, in the Big Injun sand at from 755 to 765 feet and then in the Squaw sand at from 834 to 837 feet, total depth, 844 feet. Ohio Fuel Gas Co. is drilling No. 3-4784 on the John A. Wycoff, Section 9. Same company drilled a dry hole in No. 1-3576 on the William H. Sheely, Section 10, Knox Township. In this well the top of the Niagara was found at 3,119 feet, top of lime sand from 3,251 to 3,253 feet, total depth, 3,319 feet. Same company got a fair well in No. 2-4751 on the W. Nickle, Section 36, Spencer Township. In this well the Berea sand was topped at 1,383 feet; gas pay from 1,385 to 1,393 feet, total depth, 1,394 feet. In Wheeling Township, same county, the Ohio Fuel Gas Co. made a location for No. 1-4779 on the Isaiah Gramblet, Section 10. East Ohio Gas Co. made locations for No. 1 E. C. Quinlin, Section 11, and No. 2 on the Charles and Manda Gray, Section 10.

Morgan County

In Morgan County, Marion Township, the Poole Oil and Gas Co.'s second test on the Dan Bending, Section 26, produced 10 bbls. at 2-883 to 2,903 feet, total depth 2,915 feet. Woodyard Brothers and others' No. 3 Henry S. Hollowell, Section 33, reported as good for 1 bbl. in the upper Cow Run sand at from 305 to 320 feet, total depth, 323 feet. Ohio Fuel Gas Co. is drilling No. 4-2793 on the A. M. Hummell, Section 30; No. 1-4764 on the Harley J. Thomas, fractional Section 17, and made a location for No. 1-4763 on the N. M. Wood, fractional Section 35. Same company is drilling No. 2-4781 on the C. H. Pierce, Sections 26-27, Malta Township. In Penn Township, same county, the same company is drilling No. 1-3563 on the Frank Coulson, Section 2. In the same township, Choquill and others' No. 5 on the A. M. and J. H. Crew, Section 35, is a light gas well in the lower Berea sand from 1,567 to 1,595 feet. Penn Oil and Gas Co.'s No. 12 Dennis Benjamine, Section 11, is an average gas well in the same Berea formation at from 1,659 to 1,679 feet, total depth 1,685 feet. In Union Township, James Moore and others' No. 19 on the Clyde Foraker, Section 19, was dry in the upper Cow Run at from 318 to 328 feet, total depth 331 feet. In Marion Township, the Kemrow Co. made a location for No. 3 on the Lewis T. Hoffman, Section 30.

INDIANA

Much enthusiasm prevails in Gibson County in the southwestern part of Indiana over the big gas well developed by the Shell Petroleum Corp. in a second test, 220 feet from the south line and 660 feet from the east line of the R. Onyett farm, in the NE, Section 22, Columbia Township. This well struck the top of the gas sand at 1,468½ feet and at a total depth of 1,475½ feet, the gas showed a volume of 11,718,000 feet, the largest gas producer developed anywhere in Indiana for many years which will help a great way toward supplying gas to the towns and hamlets in Gibson and adjoining counties. Another well will be started on the same lease at once as there is a good market for the gas.

The Texana Oil Co. is drilling deeper its test on the John Ford farm, Section 9, Clay Township, Pike County. Peoples Petroleum Co. is reported starting a second test on the T. J. Hurt, Section 18, Patoka Township. In Logan Township, the Shell Petroleum Corp. is drilling on the William Miley, Section 19, and H. C. Darby and others are working on a second test on the G. Stewart, Section 23, same township.

Pearce and others are drilling No. 4 on the F. E. Shattuck farm, Section 32, Prairie Creek Township, Vigo County. The Siosi Oil Corp. expects to start some work in the same township shortly. This company is drilling No. 4 on the Iley Williams, Section 4, Fairbanks Township, Sullivan County, just south of Prairie Creek Township, in what is known as the Siosi Pool.

ILLINOIS

The most actively developed area of Illinois at this time is in the Dupo Pool, in Sugar Loaf Township, St. Clair County, only a short distance out of East St. Louis. This has developed in a remarkable producing area for shallow territory and at the present time most of the new wells are being drilled on town lots. The best of the late completions in the Dupo Pool, was the Ohio Oil Co.'s No. 3 well, 300 feet from the south line and 600 feet from the west line of the G. L. Tarlton, in the NE of Section 33, Sugar Loaf Township. This well struck a crevice right in the top of the sand at 585 feet and belched forth its oil in tanks to the tune of 325 bbls. initial, without even a shot. Same company's No. 1 in the northeast corner of the Phillip Fry, in the same quarter section as the Tarlton well, made 290 bbls. initial from 654 to 714 feet. Same company's No. 5 on the Matilda Dyroff, in Lot 39, Section 28, made an initial of 54 bbls. at from 473 to 576 feet.

In the same field, Thomas Wheland's No. 1 Fred Nillman, in the SE of Section 21, produced an initial of 200 bbls. from 419 to 553 feet. St. Clair County Oil Co.'s No. 1 on the Ethel and Fred Hutchinson, in the SE, same section, produced an initial of 160 bbls. from 500 to 562 feet. H. & M. Operating Co.'s No. 1, on the George and Richard Heller lot, SE, same section, produced 125 bbls. in 24 hours from 493 to 563 feet. Morris & Yeager's No. 1 Charles LaCroix, NE, Section 28, pumped 30 bbls. from 499 to 570 feet. Landwher & Sack's No. 2 on the right-of-way of the E. St. L. & C. W. line, in the SE, Section 21, produced 50 bbls. from 484 to 541 feet. No. 4 on the same right-of-way produced an initial of 55 bbls. from 486 to 532 feet. Timberlake & Coleman's No. 1 on the Winterhoff & Le Camp Lot, in the SE, Section 21, had an initial production of 50 bbls. from 492 to 542 feet. Sparks & Pounton's No. 1 on the W. H. Linderman Lot, same section, produced an initial of 20 bbls. from 503 to 564 feet. Pruver and Zeppenfield's No. 1 O. L. Dickey Lot, NE, Section 28, pumped 50 bbls. from 477 to 566 feet. Lewis L. Hicks' No. 1 on the Vickers-Beck Lots, SE, Section 21, pumped 75 bbls. from 482 to 552 feet. Ava Oil and Gas Co.'s No. 3 in the northwest corner of the Dupo Township High School property, in the NE, Section 28, pumped 50 bbls. in 24 hours from 482 to 529 feet. L. G. Blackman and others' No. 1 J. F. Shult, in the SE, Section 21, produced but 15 bbls. initial from 512 to 562 feet. Tivy and Mingus drilled a 12-bbl. initial producer from 515 to 590 feet in No. 1 on the Zeller Lot, SE, Section 21. Knox & Robinson got only a 5-bbl. initial producer from 498 to 540 feet in No. 1 on the F. H. Weisenborn Lot, SE, Section 21, and Benoist and others found a dry hole in No. 1 on the Anna Probst, also in Section 21, at 584 to 725 feet. All these wells are in Sugar Loaf Township, St. Clair County.

Allendale Field

In the Allendale Field of Wabash Township, Wabash County, Joe S. Young, Jr., and others' No. 11 well, 650 feet from the north line and 530 feet from the east line of the Joseph Keyser farm, in the SW, Section 13, produced an initial of 30 bbls. from 1,449 to 1,461 feet. Ridge Farm Oil Co.'s test in the southeast corner of the Dr. C. E. Gilliatt, in the NE, Section 14, pumped 28 bbls. initial from 1,494 to 1,498 feet. Same company got a dry hole in a test 700 feet from the north line and 200 feet from the east line of the Edward Wright farm, in the NE, Section 13, while Phipps, Blosser and others' test, 1,000 feet from the south line and 300 feet from the east line of the Holson-Dorney farm, in the NW, Section 19, same township, was a dry hole at 1,528 feet.

In Lawrence County, Dennison Township, John Phipps and others' No. 7 well, 670 feet from the south line and 200 feet from the east line of the Wesley Clark, in the SW, Section 2, produced an initial of 40 bbls. in a stray sand found at from 341 to 348 feet. In Petty Township, same county, the Silurian Oil Co.'s No. 25 well, 550 feet from the south line

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and 650 feet from the east line of the Thornton Combs farm, in the SW, Section 20, pumped an initial of 30 bbls. at a total depth of 1,504 feet. Same company abandoned Nos. 15, 18 and 22 on the William Crump, Section 19.

Walter Squires and others' test, 600 feet from the north line and 500 feet from the west line of the J. H. Titsworth farm, in the NW, Section 6, Licking Township, Crawford County, proved a dry hole at 1,100 feet. This well, according to the owners, will be used for air after making further drilling tests on the property.

EASTERN FIELDS

(Continued from Page 75)

day and is 600 feet south of No. 3 on the same farm.

Wildcat Showing Oil

On Mill creek of Frozen Camp creek, Curtis district, Roane County, D. W. Law and others have drilled their test on the L. W. Riddle farm into the second Cow Run sand, showing for a light producer. It is two miles south of the test on the C. C. Walters farm. In DeKalb district, Gilmer County, the South Penn Oil Co. has a rig up on the R. J. Ellis farm.

In Center district, Wetzel County, the Chesbrough Manufacturing Co. completed No. 7 on the B. W. Peterson farm showing for a light pumper. In Curry district, Putnam County, J. B. Reishman has a gasser in the Big Injun sand at his No. 3 on the R. J. McCallister farm.

Lincoln and Cabell Counties

In Jefferson district, Lincoln County, the Russell Gas Co.'s test on the John Linville farm is a gasser in the Berea grit. In the same district, Earl Cameron has a gasser in the same formation at No. 3 on the J. A. Stone farm. In McComas district, Cabell County, the Hamilton Gas Co. has a gasser in the Gordon sand on the W. W. Hutchinson farm. In the same district, the West Virginia Gas Corp. has a gasser on the Rinehart Schaub farm.

In Roane County, Geary district, the South Penn Oil Co. completed in the Big Inpun sand No. 93 on the O. D. Stockly farm estimated good for 20 bbls. In DeKalb district, Gilmer County, the South Penn Oil Co. cleaned out No. 2 on the W. E. & Eugene Weaver farm, increasing its production from 7 to 15 bbls. a week. The Philadelphia Oil Co. cleaned out and shot No. 5 on the Joab Crites farm. Its production was increased from 10 to 18 bbls. a week. The Laurel Creek Oil Co. shot No. 4 on the A. L. Weaver farm, increasing its production from 4 to 10 bbls. a day.

In Magnolia district, Wetzel County, the H. M. & C. Oil Co. drilled a test on the B. B. Newman farm through the Gordon sand and it is dry in that formation. It will be tested in the Big Injun sand and will make a 3 or 4-bbl. pumper.

Starting New Work

On Grave creek, Liberty district, Marshall County, the Manufacturers Light & Heat Co. has started to drill a second test on the Goshorn heirs farm. In Union district, Clay County, the Big Laurel Oil & Gas Co. has moved a drilling machine to the Otto Bomwan farm 2 miles in advance of production. In Union district, Tyler County, Michel & Co. have shut down their test on the School Lot. In McComas district, Cabell County, C. C. Wolfe is due in the sand on the E. B. Conley farm. In the same district, the Cambridge Gas Co. is drilling on the William M. Ray farm. The West Virginial Gas Corp. is drilling on the Alexander Rose farm. In Grant district, the Hamilton Oil & Gas Co. has a rig up on the J. L. & Alice McGraw farm. In Washington district, Boone County, the Owens Bottle & Machine Co. has a rig completed on the J. D. Powell farm. In Curry district, Putnam county, the Penn Natural Gas Co. has started to drill on the J. M. Chaney farm.

In Sherman district, Calhoun County, Morris & Co. are rigging up on the Sarah E. Hersey farm. In DeKalb district, Gilmer County, Frank Golden has a rig completed on the G. M. Miller farm. In Smithfield district, Roane County, the United Carbon Co. has part of the rig material on the Phillip Cottrell farm. The same company is building a rig on the Bess Looney farm. In Sherman district, Calhoun County, Godfrey L. Cabot is building a rig on the Charity Poling farm. In Reedy district, Roane County, the Heck Oil Co. is drilling a second test on the H. W. Allen farm.

Gas Companies Still Active

The gas companies show no disposition to curtail development work. In Lincoln and Boone Counties they are very active. In Boone County the Cameron Oil & Gas Co. has rig material at a location on the J. F. Estep farm. The Owens Bottle & Machine Co. had a rig up on the J. D. Powell farm. The Osborne Gas Co. has started to drill on the Alfred T. Miller farm.

In Curry district, Putnam County, the Penn Natural Gas Co. has made a location on the J. W. Sweeney farm. J. B. Reishman has made a location on the R. J. McAlister farm. In Clay district, Wetzel County, the Littleton Oil & Gas Trust Co. is due in the sand on the David Meighan farm. In Center district, Wade, Carney & Co. are rigging up on the T. A. Shuman farm. In Liberty district, Marshall County, the Manufacturers Light & Heat Co. is rigging up on the James Chambers and J. A. Evans farms.

SOUTHWEST PENNSYLVANIA

In Springhill Township, Greene County, S. W. Meals & Co. have completed in the Fifth sand No. 6 on the Katherine Hagan farm. Good for not more than three bbls. a day. In Buffalo Township, Butler County, Heater & Co. have a Fifth sand gasser on the Betz farm. There are now but three wells drilling in this once active pool.

In Morris Township, Greene County, the Carnegie Natural Gas Co. has a gasser in the 30-foot sand at No. 4 on the W. L. Scott farm. In Richill Township, Frank Rose & Co.'s test on the Frank Saunders farm is a gasser in the Salt sand.

Westmoreland County

In Washington Township, Westmoreland County, the T. W. Phillips Gas & Oil Co. has completed in the Bradford sand at a total depth of 3,780 feet a second test on the Minerva Barnett farm. It is a gasser. In Hanover Township, Washington County, Duncan & Coulter completed a 5-bbl. pumper on the Potts farm. In Wayne Township, Greene County, the Equitable Gas Co. has a gasser at a second test on the Louise Ensminger farm. In Cecil Township, Washington County, Perry Bishop has a 10-bbl pumper on the N. R. Tanneyhill farm.

In Wayne Township, Greene County, the Dun-Mar Oil & Gas Co. completed a test on the W. E. Kernes farm. It is a gasser in the Big Injun sand.

KENTUCKY-TENNESSEE

(Continued from Page 75)

gan farm, a mile or so northwest of the Bartlett Pool, which is rated good for 250 bbls. initial. No. 1 on this farm, which was a discovery well for that particular area, was quoted good for 400 bbls. initial and caused a rush for leases westward from the Bartlett Pool, and many new wells are starting and a lot of new locations have been made over a large area. These two wells may mean a pool, or will in time become a part of the Bartlett Pool. Intervening development will tell the story in a short time as several wells are under way between the Morgan and Bartlett wells.

In the Friendship Church area the H. C. Smith Oil Co.'s No. 1 on the Ida Kelly lease is a duster, while No. 2 is rated around 15 bbls., and No. 3 is a fairly good gas well. This company is drilling on the R. C. Edwards farm, in the same area.

In the Adaburg area C. Claypool and others' No. 12 on the J. L. and J. H. Ralph 125 acres, is said to show for 50 bbls. initial at a total depth of 477 feet. In this well a string of 441 feet of casing was set, and pay sand found at from 458 to 475 feet.

Cumberland Petroleum Co. is reported to have drilled a dry hole on the Dodson farm, a little north of west of the Bartlett Poo, and almost directly east of the good wells on the G. W. Morgan farm.

James C. Ellis and others' No. 3 on the Greer heirs, in the Whittaker Pool, is reported at 30 bbls. initial. Same parties' Nos. 7 and 8 on the Keith lease, in the Weller Pool, are rated at 25 bbls. each initial production.

Standard Oil Co. of Kentucky found a dry hole in its initial venture in the western Kentucky area, on the Clarence Patton farm, in the Bartlett Pool.

In the Whittaker Pool, Ray Bigler and others' No. 8 on the J. E. Hendrix farm, is good for 15 bbls. initial. In this well a string of 550 feet of casing was set, sand from 550 to 576 feet, total depth 576 feet.

Daviess County Wells

Reports from the extreme western part of Daviess County are that Creek Drilling Co. has drilled in its test on the R. C. Clayton lease, about 2 miles west of the hamlet of St. Joseph, showing a production of 25 bbls. This well is almost an offset to the same company's discovery well on the Hamilton lease.

Ira Huff is reported to have a dry hole in No. 1 on the Jess Litsey 20 acres, near the Burton Pool. Clay, Wright & Robbins' test on the Rollie Ambrose lease in the Jones Pool, is reported with an initial of 30 bbls. from the Jones sand.

Mecca Oil Co.'s test on the Zula Johnson, near Cane Run, not far from Habit, is reported showing for 50 bbls., and may bring about an active development in that part of the county. Petroleum Exploration Co. reports a dry hole on the W. R. Russell farm, in the Red Hill district. Hupp and Duff have a dry hole on the Connor heirs' 94 acres, about 2 miles south of Whitesville, at 660 feet. Goldburg, Young and others' Nos. 5 and 6 on the Lindsay Purcell, in the Red Hill district, are rated at 35 and 60 bbls., respectively.

Scattered Completions

In the Glasgow Field of Barren County, J. W. Porter's test on the George Mayfield lease, in the Hall-Baker Field, is reported dry at 550 feet, and the Consolidated Oil Co.'s No. 3 Mansfield lease, in the same pool, produced but 1 bbl. initial.

In Warren County, the Penn Homa Oil Co.'s No. 20 in the northeast corner of the Hobson heirs' lease, west of Bowling Green, produced an initial of 4 bbls. at 918 feet. W. E. Eyl's No. 5, in the northwest corner of the W. D. Duncan lease, southwest of Bowling Green, produced 1 bbl. at 1,093 feet.

In the Niagara Field of Henderson County, unknown parties have a well on the Basil Griffin lease, reported good for 20 bbls.

Field Pickups

Thrasher & Cox are drilling on the Williams heirs' 22 acres, in the Cane Run area of Ohio County, close to the Shell Petroleum Co.'s test on the T. Weatherford lease. Planet Oil Co. is drilling No. 1 on the Williams heirs' 32 acres, same area.

The Wood Oil Co., Inc., struck a flow of gas on the Herman Fuqua lease, near Reynolds Station, in the Jett sand, but is drilling on down to the Barlow. This is in Ohio County.

James C. Ellis and others are nearing sand at two tests in the vicinity of Whitesville, one being on the Rebecca Westerfield and the other on the Fanny Tanner lease.

Doc. Sirman, who has been operating the Nancy Farmer lease in Friendship church area of Ohio County, is making a rush visit to West Texas, where he is said to hold a large block of acreage.

L. P. Lee, of Lexington, Ky., is looking over the territory around the Morgan and Bartlett Pools in Ohio County, where he expects to start operations in a short time on the Patten lease.

Dan Price, of the Superior Oil Co., of Winchester, has been looking over the Owensboro Field.

TWO TESTS FAILURES IN MOUNT CALM FIELD

By Neil Williams

CORSICANA, Tex., July 29.—Although the discovery well in the Mount Calm shallow chalk field in Hill County continued to pump at the rate of from 25 to 30 bbls. of net oil daily the past week, the second and third tests drilled proved failures. Harper & Starkey's No. 1 Jones tested dry at 790 feet and Fentress and associates' No. 1 Reynolds was dry at 725 feet. Both are standing. Three other tests have reached the chalk level, these being Harper & Latson's No. 2 Jones on the same tract as the discovery well; McElmurry and associates' No. 1 Coates, and Thomas & Bland's No. 1 Clark.

Two failures were reported on the Boggy Creek Dome. Humble Oil & Refining Co.'s No. 1 Beard, a southwest extension test, was being abandoned at 3,820 feet, and the same company's No. 3-A Elliott & Clark, northeast of production, was quit at 2,934 feet. At Boggy Creek, Humble's No. 1 Holloway was drilling shale at 820 feet; No. 2 Neches River was spudding in; No. 3-A Todd was drilling chalk at 3,437 feet, and Magnolia Petroleum Co.'s No. 1 Williams on the north side was rigged up.

Humble Oil & Refining Co.'s No. 4-A Southern Pine on the Posey Saline, 8 miles south of Boggy Creek in Anderson County, is rigged up, and Pure Oil Co.'s No. 1 Jackson, Bethel Dome, is drilling hard sandy shale at 4,612 feet.

In Rusk County, Magnolia Petroleum Co.'s No. 1 Duran, Lollar Survey, encountered a sandy shale showing gas and oil but a drill stem test showed dry at 2,806 feet. Louisiana Petroleum Co.'s No. 1 Alford, Rusk County, is drilling shale and lime at 1,610 feet, and C. M. Joiner's No. 2 Bradford, same county, is drilling gummy shale at 1,360 feet.

Amerada Petroleum Corp.'s No. 1 Wade, Fields Survey, Upshur County, is drilling hard sand at 5,020 feet. A. M. Wilborn's No. 1 Hudspeth has been shut down in chalk at 2,949 feet. Pure Oil Co.'s No. 1 Davis, geological test, Van Zandt County, at latest report was drilling sticky shale at 1,270 feet. Alexander and associates' No. 1 Anderson, Robertson County, Webb Survey, still is shut down with drill stem stuck at 3,340 feet.

Killiam & Phillips' No. 2 Jones, Falls County, is in a sandy lime showing oil at 1,623 feet and is waiting to make a drill stem test with a patented tool. Haley & Young's No. 1 Night, Freestone County, is drilling hard sand at 4,226 feet. Patty and associates' No. 1 Randall, Leon County, is drilling sandy shale at 927 feet.

In Limestone County, C. F. Lytle and associates' No. 1 Thompson, Mexia Trinity sand test, still is fishing stuck drill stem at 6,061 feet. Jenson & Baggett's No. 1 Powell, same county, is rigged. Killiam & Phillips' No. 3 Bryant, Naber Survey, McLennan County, is trying to set 6⅝-inch casing with a packer to shut off salt water flow encountered at 1,340 feet.

Nash and associates' No. 1 Adams, Matt Borren Survey, northeast of the Currie Field, Navarro County, tested salt water with a drill stem test at 2,136 feet and is drilling deeper in sandy shale at 2,580 feet. Riverland Oil Co. and Tidal Oil Co.'s No. 2 Finch, north of the Powell Field, same county, is drilling shale at 2,691 feet.

Daily average production of East Central Texas fields for the week ending July 27 was:

East Central Texas

Boggy Creek	2,742
Cedar Creek	75
Currie	434
Hill County	25
Mexia	5,345
Minerva	655
Nigger Creek	345
Powell	7,862
Richland	400
Thrall	32
Wortham	1,255
Total	19,220
Week ending July 20	19,348
Decrease	128

WILDCAT OPERATIONS IN TEXAS PANHANDLE

(Continued from Page 67)

DONLEY COUNTY

Blue Bonnett Oil Co.'s No. 1 Ball, 1,075 ft. from N line, 985 ft. from E line, Sec. 22, Blk. E, D.&F.R.R. Sur. ..S.D. 1,912 ft.

Marine Oil Co.'s No. 1 Sawyer, C SW, Sec. 5, Blk G, G.C.&S.F. Sur. ..... Running 6⅝-in. csg. 3,450 ft.

GRAY COUNTY

Anderson et als' No. 1 Vallmert, 330 ft. from S, 330 ft. from W, Sec. 140, Blk. 3, I.&G.N. Sur. ..... Rigging up.

Amagray Oil Co.'s No. 2 Chapman, 330 ft. S and W NE cor. W½ SW, Sec. 9, Blk. 26, H.&G.N. Sur. ..... Show gas 2,025-2,130 ft and 2,230-50 ft; 30,000,000 ft. gas 2,315-20 ft; S.D. 3,045 ft.

British-American Oil Co.'s No. 2 Purviance, 330 ft. N and E SW cor. E 160 ac., Sec. 61, Blk. B-2, H.&G. N.R.R. Sur. ..... Location.

Champlin Ref. and Danciger's No. 2 Cook-Faulkner, 860 ft. N and 330 ft. E, SW cor. W 120 ac. of E 200 ac., Sec. 30, Blk. B-2, H.&G.N.R.R. Sur. ..... Location.

Champlin Ref. Co.'s No. 2 Jackson, 330 ft. each way from SE cor., W 100 ac., Sec. 60, Blk. B-2, H.&G.N.. Sprayed 5 bbls; T.P. 2,920 ft; S.D. 3,291 ft.

Crabtree Drlg. Co.'s No. 1 B. F. Talley, SW NE, Sec. 114, Blk. M-2, B.S.&F. Sur. ..... S.D. 2,740 ft.

Constantine et als' No. 1 Dial, 330 ft. S and E of NW cor. W½ NW, Sec. 32, Blk. 25, H.&G.N. Sur. ..... S.D. 2,965 ft; encountered S.W.

Danciger O. & R. Co.'s No. 2 Beck, 330 ft. N and E SW cor. NW, Sec. 28, Blk. B-2, H.&G.N. Sur. ..... Drlg. 2,252 ft.

Danciger O. & R. Co.'s No. 3 Beck, 330 ft. S and 990 ft. E NW, Sec. 28, Blk. B-2, H.&G.N.R.R. Sur. ..... Drlg. 2,667 ft.

Danciger et als' No. 11 Jackson, 330 ft. S and 1,320 ft. W, NE cor. NW, Sec. 88, Blk. B-2, H.&G.N. Sur. .... Drlg. 1,310 ft.

Danciger O. & R. Co.'s No. 1 Williams, 330 ft. from N, 330 ft. from E, S½ NW ..... Drlg. 2,385 ft.

Delaney & Associates Oil Co.'s No. 8 Jackson, 990 ft. S and 330 ft. E NW cor. E½ SW, Sec. 88, Blk. B-2. H.&G.N.R.R. Sur. ..... S.D. 2,125 ft.

Dye & Gillette's No. 2 J. L. Noel, 330 ft. N and E, SW cor. NE, Sec. 187, Blk. 3, I.&G.N. Sur. ..... Location.

Bob Dunlap's No. 2 Morse, 990 f.. from N, 330 ft. from W, Sec. 2, Blk. 26 ..... Drlg. 1,570 ft.

Empire G. & F. Co.'s No. 1 Noel, C SE, Sec. 151, Blk. 3, I.&G.N.R.R. Sur. ..... Drlg. 2,394 ft.

Sines Q Reiger's, formerly Eslick et als' No. 1 Mrs. J. A. Hopkins, NW cor. W 80 ac. of SW, Sec. 84, Blk. B-2, H.&T.C. Sur. ..... S.D. 3,206 ft.

Gardner Bros. and Collins' No. 2 Saunders, 955 ft. from S and 330 ft. from E of W 68 ac. E½, J. G. Eustice Sur. ..... Location.

Gulf Prod. Co.'s No. 2 Saunders, 990 ft. N and E, SW cor. Sec. 3, Blk. 1, A.C.H.&B.R.R. Sur. ..... Drlg. 1,990 ft.

Herragan Oil Co.'s No. 1 Bradford, 330 ft. from N and 990 ft. from E. Sec. 123, Blk. B-2 ..... Spudding.

Independent O. & G. Co.'s No. 1 Hollenbeck, 990 ft. each way from NE cor. NE, Sec. 176, Blk. 3, I.& G.N.R.R. Sur. ..... 5,000,000 ft. gas from 2,428-83 ft.; S.O. 3,170-75 ft; fish. 3,220 ft.

Lyon et als' No. 1 Morse, 330 ft. N and E SW cor. N½ NE, Sec. 2, Blk. 26, H.&G.N.R.R. Sur. ..... S.D. 1,320 ft.

Magnolia Pet. Co.'s No. 1 Wright, 330 ft. S and W lines S½ SW, Sec. 13, Blk. 3, I.&G.N. Sur. ..... Rigging up.

McLain Oil Co.'s No. 1 Back, 1,000 ft. from W line and 330 ft from N line, NW, Sec. 24, Blk. 25, H.&G.N. Sur. ..... 1,000,000 ft. gas 2,105-10 ft. and estimated 3,000,000 ft. gas 2,202-08 ft; show oil 2,565-90 ft. and 2,714 ft; S.D. 2,846 ft.

McMan O. & G. Co.'s No. 3 Palmer, 899 ft. N and 330 ft. W, SE cor. E 100 ac. of W 200 ac., Sec. 31, Blk. B-2, H.&G.N. Sur. ..... Location.

McMan O. & G. Co.'s No. 4 Palmer, 899 ft. S and 330 ft. W, NE cor. of E 100 ac. of W 200 ac., Sec. 31, Blk. B-2, H.&G.N. Sur. ..... Location.

Midwest Expltn. Co.'s No. 2-B Bowers, 1,320 ft. from N. 330 ft. from E, Sec. 93, Blk. B-2, H.&G.N.R.R. Sur. ..... Location.

Mordyan O. & G. Co.'s No. 2 Davis, 330 ft. from N, 990 ft. from E, S½ NW, Sec. 8, Blk. 1 ..... Drlg. 600 ft.

Nabob Oil Co.'s No. 2 Morse, 660 ft. from W line and 330 ft. from S line SW, Sec. 67, Blk. 25, H.&G.N. R.R. Sur. ..... Spraying 20 bbls. oil; 10,000,000 ft. gas 2,465 ft; C.O. 2,602 ft.

Oil Operators' No. 1 Bowers, 330 ft. from N, 330 ft E, Sec. 93, Blk. B-2, H.&G.N. Sur. ..... Drlg. 1,280 ft.

Operators Oil Co.'s No. 5 Cook-Faulkner, 990 ft. N and 330 ft. W, SE of W 90 ac., Sec. 30, Blk. B-2, H.&G. N. Sur. ..... Drlg. 1,746 ft.

Operators Oil Co.'s No. 6 Cook-Faulkner, 330 ft. S and E, NW cor., Sec. 30, Blk. B-2, H.&G.N.R.R. Sur. .... Drlg. 1,350 ft.

Osborn et als' No. 1 Morse-H, 330 ft. N and E SW cor. S½ NE, Sec. 1, Blk. 26, H.&G.N.R.R. Sur. ..... Building rig.

Phillips Pet Co.'s No. 1 Eakin, 330 ft. from S. 330 ft. from W, Sec. 56, Blk. 25, H.&G.N.R.R. Sur. ..... Drlg. 560 ft.

Phillips Pet. Co.'s No. 1 Jackson, 330 ft. each way from NE cor. NE, Sec. 58, Blk. B-2, H.&G.N.R.R. Sur. .. Show oil 2,712-22 ft; 250 ft oil in hole; set 5-in. csg. 3,018 ft; T.D. 3,125 ft.

Phillips Pet. Co.'s No. 2-A Jackson, 425 ft. S and E, NW NE, Sec. 88, Blk. B-2, H.&G.N.R.R. Sur. ..... Drlg. 2,575 ft.

Phillips Pet. Co.'s No. 5 Jackson, 330 f.. S and 990 ft. E NW cor. S½ NE, Sec. 88, Blk. B-2, H.&G.N. Sur. .... 6,000,000 ft. gas 2,850 ft; set 5-in. csg. 2,900 ft; S.O. 2,876 ft; T.D. 2,960 ft; swbd. 40 bbls; T.P. 2,-876-84 ft. and 2,912-16 ft.

Phillips Pet Co.'s No. 4 Palmer, 330 ft. N and W of E 831 ac., Sec. 31, Blk. B-2 ..... Setting 8¼-in. csg. 2,760 ft.

Phillips Pet. Co.'s No. 6 Palmer, 330 ft. S and W, NE cor., Sec. 31, Blk. 3, H.&G.N.R.R. Sur. ..... Rigging up.

Phillips Pet. Co.'s No. 7 Palmer, 990 ft. N and 330 ft. E, SW cor. E 183.1 ac. of Sec. 31, Blk. B-2, H.&G. N. Sur. ..... Rigging up.

Phillips Pet. Co.'s No. 8 Palmer, 1,650 ft. N and 330 ft. E of SW cor. E 83.1 ac., Sec. 31, Blk. B-2, H.&G. N.R.R. Sur. ..... Drlg. 412 ft.

Prairie O. & G. Co.'s No. 1 Langham, 330 ft. N and E SW, Sec. 1, Blk. B-2, H.&G.N.R.R. Sur. ..... Drlg. 1,600 ft.

Panhandle Ref. Co.'s No. 1 Saunders, 330 ft. S and E NW cor. E½ NE, Sec. 3, Blk. 1, A.C.H.&B. Sur. .... 15,000,000 ft. gas 2,150-2,320 ft.; show oil 2,663 ft.; T.D. 2,781 ft; shot 150 qts. from 2,630-2,759 ft. and 340 qts. from 2,640-2,759 ft.; bailed 2 bailers oil; C.O.

Panhandle Ref. Co.'s No. 2 Saunders, 330 ft. S and W NE cor. E½ NE, Sec. 3, Blk. 1, A.C.H.&B. Sur. .... S.D. 2,850 ft; shot 540 qts. 2,630-2,845 ft; C.O.

Quillian et als' No. 1 Barrett, 330 ft. from N. 330 ft. from E, Sec. 131, Blk. 3, H.&G.N. Sur. ..... Rigging up.

Ray Massie's No. 4 Chapman, 330 ft. each way from NW SE SW, Sec. 51, Blk. 25, I.&G.N. Sur. ..... Spraying 10 bbls. per hr 2,720-50 ft; T.D. 2,952 ft; to P.B.

Shamrock Oil Co.'s No. 1 Clayton, 150 ft. from NE cor. of S 80 ac. of W 140 ac. of E 277 ac., Sec. 50, Blk. 25, H.&G.N. Sur. ..... Drlg. 625 ft.

Shamrock Oil Co.'s No. 2-J Chapman, 450 ft. from N, 150 ft. from E of W 41 ac. of E 319 ac. ..... Drlg; T.D. 1,915 ft; U.R. 8¼-in. csg.

Shell Pet. Corp's No. 3 McConnell, 330 ft. N and W SE cor. Sec. 174, Blk. 3, I.&G.N.R.R. Sur. ..... 3,000,000 ft. gas 2,935 ft; drlg. 3,-253 ft; S.O. 3,165-70 ft. and 3,-182 ft.

Sherwood et als' No. 1 Gething, 330 ft. N and W SE cor N½ NE, Sec. 14, Blk. A-9, H.&G.N. Sur. ..... Drlg. 719 ft.

Skelly Oil Co.'s No. 1 Jackson, 330 ft. from S and W lines E½, Sec. 62, Blk. B-2, H.&G.N.R.R. Sur. ..... Show gas 2,394-2,410 ft; drlg. 2,-929 ft; S.O. 2,907-17 ft.

Skelly Oil Co.'s No. 2 Jackson, 330 ft. S, 2,990 ft. W of W 160 ac., Sec. 90, Blk. B-2 ..... Drlg. 2,690 ft.

Skelly Oil Co.'s No. 3 Jackson, 330 ft. from S and E lines of W 160 ac., Sec. 90, Blk. B-2, H.&G.N.R.R. Sur. ..... Drlg. 2,603 ft.

St. Clair Oil Co.'s No. 1 Dial, 330 ft. S and W NE cor. SE, Sec. 10, Blk. 25, H.&G.N.R.R. Sur. ..... Cellar.

St. Clair Oil Co.'s No. 1 Rowe, Sec. 32, Blk. R ..... S.D. 3,490 ft. hole full water.

St. Clair Oil Co.'s No. 1 L. S. Stockton, SE cor. Sec. 35, W. R. Lee Sur. ..... Spudded and S.D.

Sun Oil Co.'s No. 3 Purviance, 250 ft. from S, 287 ft. from W, Sec. 61, Blk. B-2, H.&G.N.R.R. Sur. ..... Standardizing 2,812 ft.

The Texas Corp.'s No. 10 Bowers, 330 ft. from N and E lines of E½, Sec. 89 ..... Drlg. 2,355 ft.

The Texas Corp.'s No. 11 Bowers, 330 ft. S, 990 ft. E of E½, Sec. 89 ..... Drlg. 2,785 ft.

The Texas Corp.'s No. 12 Bowers, 330 ft. from N and 330 ft. from W of NE, Sec. 63, Blk. B-2 ..... Drlg. 2,760 ft.

The Texas Corp.'s No. 13 Bowers, 990 ft. from N and 330 ft. from W line E½, Sec. 89, Blk. B-2, H.&G. N.R.R. Sur. ..... Drlg. 1,988 ft.

The Texas Corp.'s No. 3 Bruce Bull, 330 ft. from N, 330 ft. from W. Sec. 2, Blk B-2 ..... Drlg. 1,575 ft.

The Texas Co.'s No. 3-B Chapman, 330 ft. S and E, NW cor. SE, Sec. 69, Blk. 25, H.&G.N.R.R. Sur. ..... Location.

The Texas Co.'s No. 2 Comb-Worley, 330 ft. N and 2,310 ft. W SE cor. S½ S line, Sec. 36, Blk. 3, I.&G.N. Sur 5,000,000 ft. gas 2,835-50 ft. and 70,000,000 ft. gas 2,884 ft; T.D. 2,915 ft; sprayed 52 bbls. first 24 hrs; T.P. 2,915 ft.

The Texas Co.'s No. 3 Comb-Worley, 330 ft. N and W SE cor. Sec. 36, Blk. 3, I.&G.N. Sur. ..... Rigging up.

The Texas Co.'s No. 4 Comb-Worley, 330 ft. N and 1,736 ft. W SE cor. Sec. 36, Blk. 3, I.&G.N. Sur. .... Rigging up.

The Texas Corp.'s No. 4 Cook-Faulkner, 1,973 ft. from W line and 330 ft. from N line of W 160 ac., Sec. 29, Blk. B-2, H.&G.N. Sur. ..... Fish. 2,835 ft.

The Texas Corp.'s No. 3 Cook-Faulkner, 1,313 ft. from W line and 380 ft. from N line of W 160 ac., Sec. 29, Blk. B-2, H.&G.N.R.R. Sur. ..... Drlg. 2,755 ft.

The Texas Co.'s No. 2 McLarty-B, at center of J. M. Rose Sur. ..... Drlg. 2,110 ft.

The Texas Co.'s No. 3 Shaw, 330 ft. N and E of SW of E 279 ac., Sec. 5, Blk. 1, A.C.H.&B. Sur. ..... Drlg. 333 ft.

The Texas Co.'s No. 4 Williams, 330 ft. each way from NE NE NW, Sec. 6, Blk. 1, A.C.H.&B. Sur. ..... T.D. 2,800 ft; T.P. 2,725-35 ft. and 2,760-80 ft; C.O. and swbng. 182 bbls. daily.

The Texas Co.'s No. 6 Williams, 330 ft. S and E, NW cor. NE, Sec. 6, Blk. 1, A.C.H.&B. Sur. ..... Rigging up.

White Eagle O. & R. Co.'s No. 1 Faulkner, 330 ft. each way from SE cor. of E 60 ac., Sec. 29, Blk. B-2. H.&GN Sur ..... Drlg. 330 ft.

P. A. Thorpe's No 1 Finley, 3,416 ft. from S and 330 ft. from W of B. F. Chaney Sur. ..... Drlg. 1,500 ft.

Wilcox-Pampa Oil Co.'s No. 8 Comb-Worley, 330 ft. NW SE SE, Sec. 60, Blk. 3, I.&G.N. Sur. ..... Drlg. 2,768 ft; first gas at 2,675 ft; S.O. 2,755 ft.

Wilcox-Pampa Oil Co.'s No. 9 Combs-Worley, 330 ft. S and E, NW cor. NE SW, Sec. 35, Blk. 3, I.&G.N.R. R. Sur. ..... Drlg. 300 ft.

HOCKLEY COUNTY

World Oil Co.'s No. 1 Ellwood, 320 ft. from N and W lines, League 7, Wilbarger County School lands; elevation 3,363 ft; contract depth 5,000 ft. ..... S.D. 2,810 ft.

HARTLEY COUNTY

Amarillo Oil Co.'s No. 9 Lee Bivins "A," C NW, Sec. 6, Blk. 21 ..... Show oil 3,780 ft.; 100,000 ft. wet gas 3,990 ft.; T.D. 4,145 ft.; to plug back.

HUTCHINSON COUNTY

Amarillo Oil Co.'s No. 2 Ingerton-A, 1,650 ft. from N line, 1,071 ft. from E line, Sec. 41, H.&T.C.R.R. Sur 50,000,000 ft. gas at 1,300 ft; set 8-in. csg. 2,300 ft; 500,000 ft. gas 1,660 ft; drlg. 2,510 ft; 7,000,000 ft. gas.

Alamosa Oil Co.'s No. 4 Sanford, 310 ft. S and 320 ft. W, NE cor. of N 160 ac. of S 240 ac., Sec. 85, Blk. 46, H.&T.C. Sur. ..... Drlg. 358 ft.

Danciger et als' No. 2 Moore, 330 ft. from E, 990 ft. from S, W½ SE, Sec. 125, Blk. 4 ..... T.D. 3,039 ft; first oil 2,972-78 ft; T.P. 3,032-39 ft; 1,000 ft. oil in hole.

Devore Oil Co.'s No. 1 Johnson Bros., 330 ft. from S and E line, NW SW, Sec. 28, Blk. Y, A.&B. Sur. ..... Location.

Holmes et als' No. 2 Quinn, 990 ft. from S line and 330 ft. from E line SW, Sec. 7, Blk. 9, I.&G.N. Sur. ..... Drlg. 2,400 ft.

Holmes et als' No. 2 Moore, 990 ft. N and 330 ft. E. SW cor. E½ SE, Sec. 125, Blk. 4, I.&G.N.R.R. Sur. .. Rig.

Huey et als' No. 3 Smith et al, 330 ft. from N and 600 ft. from W of S 40 ac. of E 100 ac., SE, Sec. 12, Blk. Y ..... Spudded and S.D.

Mariand Oil Co.'s No. 2 Reimer, 3,753 ft. S and 450 ft. E of NW cor., Sec. 31, Blk. 47, H.&T.C. Sur. .... Cellar.

McMan O. & G. Co.'s No. 2 Sanford, 300 ft. from W line and 315 ft. from S line N 274 ac., Sec. 83, Blk. 46, H.&T.C. Sur. ..... Set 8-in. csg. 2,896 ft.

Midwest Expltn. Co.'s No. 2 Moore, 330 ft. from S, 1,320 ft. from W, Sec. 125, Blk. 4, H.&G.N. Sur. ..... Set 15-in. csg. 274 ft.

Oil Operators' Trust Co. and Marland's No. 2 J. M. Stanford-B, Sec. 82, Blk. 46, H.&T.C. Sur. ..... S.D. 3,039 ft; C.O. to run csg.

O. B. Penney's No. 2 Johnson Bros., 330 ft. from S line. 330 ft. from W line W½ NE, Sec. 35, Blk. Y, A.&B. Sur. ..... 31,000,000 ft. gas 1,990 ft; S.D. 2,-175 ft.

Pennowa Oil Co.'s No. 3 Smith, 330 ft. S and W, NE NW Sec. 7, Blk Y, N&C Sur. ..... Rig.

Phillips Pet. Co.'s No. 1 Cheatham, 427 ft. N and 330 ft. W SE cor. SE SE, Sec. 38, Blk. Y ..... Drlg. 1,945 ft.

Phillips Pet. Co.'s No. 1 Johnson Bros., 330 ft. from N and W lines NW, Sec. 34, Blk. Y, A.&B. Sur. ..... Pay 2,951-72 ft; initial prod. 30 bbl. oil and 5,000,000 ft. gas; S. D. 2,972 ft.

Phillips Pet. Co.'s No. 1 Johnson-Kotz, 350 ft. N and 330 ft. E SW W ½ SW, Sec. 35, Blk Y ..... Drlg. 1,020 ft.

Phillips Pet. Co.'s No. 4 Johnson, Sec. 28, Blk. Y, A.&B. Sur. ..... 2,000,000 ft. gas; drlg. 2,480 ft.

Phillips Pet. Co.'s No. 6 (Florence), 330 ft. each way from S and W lines, E½ ..... S.D. 2,760 ft.

Prairie O. & G. Co.'s No. 4 Cal Merchant, 5,612 ft. S 330 ft. E, NW, Sec. 37, Blk. 47, H.&T.C.R.R. Sur. .. Drlg. 750 ft.

Prairie O. & G. Co.'s No. 4 Shaw, 330 ft. S and 990 ft. W NE cor., Sec. 27, Blk. Y ..... Drlg. 2,245 ft.

Skelly Oil Co.'s No. 2 Lee Bivins, 306 ft. from E and 1,242 ft. from S line, S 160 ac. of N 320 ac., Sec. 84, Blk. 46, H.&T.C.R.R. Sur. ..... Location.

Skelly Oil Co.'s No. 8 Whittenburg, 330 ft. from S and 2,230 ft. from W, Sec. 22, Jameson Sur. ..... Drlg. 1,200 ft.

Skelly Oil Co. No. 7 Whittenburg, 330 ft. from S and 1,570 ft. from W lines, Sec. 22, Jameson Sur. ..... Drlg. 2,865 ft.

Sunny Jim Oil Co.'s No. 2 Pitts, 330 ft. each way from most southerly SE cor., Sec. 9, Blk. M-21 ..... Drlg. 550 ft.

The Texas Company's No. 2 Quinn, 990 ft. N, 330 ft. E SW cor. E½, Sec. 7, Blk. 9, I.&G.N. Sur. ..... Drlg. 1,800 ft.
Travelers Oil Co.'s No. 2 Cockrell, 350 ft. from E and S line, Sec. 8, Blk. B-3, D.&S.E. Sur. ..... Location.

KING COUNTY

Huff Oil Co.'s No. 1 Martin, 1,320 ft. from N line and 1,320 ft. from E line, Sec. 171, Blk. F, H.&T.C. Sur. .. Rig.

LAMB COUNTY

Dan Freed et als' No. 1 Ellwood, CWL, Sec. 9, Blk. T, T. A. Thompson Sur. ..... Drlg. 1,760 ft.

LIPSCOMB COUNTY

Brown et als' No. 1 Box T Ranch, SW NE, Sec. 612, H.&T.C. Sur. ..... S.D. 3,210 ft.
Okla. Public Service Co.'s No. 1 C. W. Jones, NE SW, Sec. 100, H.&T.C. Sur. ..... S.D. 4,570 ft.

LUBBOCK COUNTY

Center Oil Co.'s No. 1 Bowles Ranch ..... Small show oil 1,133-40 ft.; sand. fishing 4,167 ft.

MOORE COUNTY

Amarillo Oil Co.'s No. 1 Read-A, C NW, Sec. 14, Blk. 13-12, D.&P. Sur. ..... Drlg. 1,470 ft.
Amarillo Oil Co.'s No. 1 Perkins-A, 330 ft. each way out of NW cor. NE, Sec. 76, Blk. 3 ..... Drlg. 650 ft.
Amarillo Oil Co.'s No. 2 Warrick, C S 160 ac., Sec. 92, Blk 46, H.&T.C. Sur. ..... 60,000,000 ft. gas from 1,580-2,910 ft; show oil; T.D. 3,440 ft; plugging back for gas well.
Red River Gas Co.'s No. 1 J. M. Shelton, 330 ft. each way from SE cor., Sec. 52, Blk. 3, G.&M. Sur. ..... Location.
Dana O. & G. Co.'s No. 1 Anthony, C NW, Sec. 260, Blk 44, H.&T.C.R.R. Sur. ..... Rig.
Dana O. & G. Co.'s No. 1 Road-A, C NW, Sec. 14, Blk. B-12 ..... Location.
Fritch O. &. G. Co.'s No. 1 Lee Burns, C NE 40 ac. of N 160 ac., Sec. 4, Geo. Mahan Sur. ..... 2,000,000 ft. gas 1,550-65 ft; drlg. 1,706 ft.
Phillips Pet Co.'s No. 1 Taylor, 330 ft. N and E SW cor. E½ NW cor. Sec. 244, Blk. 3-T, T.&N.O. Sur. ... 5,000,000 ft. gas from 2,825-2,935 ft.; 10,000,000 ft. gas 3,020 ft.; 20,000,000 ft. gas 3,040 ft.; reset 6-in. csg; T.D. 3,506 ft; to plug back for gas well.
Phillips' No. 1 Wilson, 330 ft. each way out of NW cor. S½ SE, Sec. 157, Blk. 3-T ..... Standardizing at 2,598 ft.
Skelly Oil Co.'s No. 8 Armstrong & Byrd, 2,920 ft. S and 3,752 ft. of NW cor., Proctor Sur. ..... 27,000,000 ft. gas 2,550-2,760 ft.; 47,000,000 ft. gas 2,550-2,760 ft; T.D. 3,131 ft; lime pay 3,125-31 ft; 200 ft. oil in hole.
Skelly Oil Co.'s No. 9 Armstrong & Byrd, 2,220 ft. S and 990 ft. E NW cor., Proctor Sur. ..... 9,000,000 ft. gas 2,695-2,720 ft; set 6-in. csg. 3,045 ft.

MOTLEY COUNTY

Explin. Co.'s No. 5 Matador, C, Sec. 45, Blk. J-B, C. B.&C.N.G.R.R. Sur. ..... S.D. 529 ft.
Explin. Co.'s No. 6 Matador, 330 ft. from N line and 330 ft. from E line, Sec. 132, Blk. M ..... C.O. 150 ft.
Matador Oil Corp.'s No. 1 Owen, C NE, Sec. 10, Blk. G, B.&B. Sur. ..... Drlg. 300 ft.

RANDALL COUNTY

W. A. Patterson's No. 1 Palo Duro, Sec. 60, Blk. K-14 ... S.D. 1,250 ft.

ROBERTS COUNTY

Big Bend Oil Co.'s No. 1 Ledrick, Sec. 7, Blk. 5-A ..... S.D. 5,975 ft.

WHEELER COUNTY

Anderson's No. 1 Meiners, C SW SE, Sec. 71, Blk. 17, H.&G.N.R.R. Sur. ..... 9,000,000 ft. gas 1,710-70 ft; S.D. 1,770 ft.
Angus et als' No. 1 Linkey, C NE NW, Sec. 126, Blk 23 .. S.D. 450 ft.
Byrens et als' No. 1 Johnson, SW cor. NE, Sec. 88, Blk. A-5, H.&G.N. Sur. ..... S.D. 2,920 ft.
Fain et als' No. 2 Binkley & Cain, C SE, Sec. 5, Blk. 24, H.&G.N. Sur. ..... U.R. 10-in. csg. 1,600 ft.
Gillespie et als's No. 1 McMurtrey, C NW SE, Sec. 67, Blk. 17, H.&G.N. Sur. ..... 10,000,000 ft. gas 1,810-1,975 ft; S.D. 2,246 ft.
Johnson et als' No. 1 Hicks, C NW SW, Sec. 49, Blk. 17, H.&G.N.R.R. Sur. ..... U.R. 8¼-in. csg. 1,225 ft.
Johnson & Wisch Kamper's No. 1 West, C NE NW, Sec. 30, Blk. 17, H.&G.N. Sur. ..... S.D. 1,240 ft.
Lone Star Gas Co.'s No. 3 Burcham, C NE SE, Sec. 91, Blk. 17, H.&G.N. Sur. ..... Spudded.
Magnolia Pet. Co.'s No. 1 Laycock, 652 ft. from W and 660 ft. from N, SE, Sec. 9, Blk. 27, H.&G.N.R.R. Sur. . Location.
Martin & Dubois' No. 1 Otis Sasher, C SW SE, Sec. 69, Blk. 17, H.&G.N. Sur. ..... Drlg. 1,840 ft; first gas 1,640 ft.
Osage Dev. Co.'s No. 1 Purcell, C SE NE, Sec. 51, Blk. 17, H.&G.N. Sur. ..... Spudding.
Upham Gas. Co.'s No. 3 Gooch, C SW SW, Sec. 81, Upham Gas Co.'s No. 1 Ladd, C NE, Sec. 97, Blk. 23, H.&G.N. Sur. ..... Location.
Upham Gas Co.'s No. 1 Shelton, C SE NE, Sec. 22, Blk. 24, H.&G.N.R.R. Sur. ..... Rigging up.
Vaughn et als' No. 1 Ackley, 330 ft. from N, 330 ft. from W. Sec. 4, Blk. 27, H.&G.N. Sur. ..... Rigging up.

WILDCAT OPERATIONS IN WEST TEXAS

(Continued from Page 66)

Mid-Kansas Oil Co.'s No. 1 W. E. Lackey, 330 ft. N and E of SW cor. Sec. 272, Blk. 1-A, H.&T.C. ..... Pay 3,755-56 ft.; 6⅝-in. casing set 3,451 ft.; drlg. 3,866 ft.
Ray E. McCamey et al's No. 1 McCutcheon, 2,300 ft. S and 785 ft. W of NE cor. of T. J. Hines Sur. No. 4 ... Underreaming 3,395 ft.

CONCHO COUNTY

Duffy et al's No. 1 Gilliam, 1,520 ft. N and 1,120 ft. W of SE cor. Sec. 21, Blk. 10, H.&T.C.R.R. ..... Spudded and shut down.
Jones & Leiner's No. 1 Jones, 420 ft. S and 15 ft. E of NW cor. John G. Reh Sur. No. 1,878 ..... Top lime 1,770 ft.; top pay 1,775-80 ft.; 18 ft. oil in hole; to test; cleaning out 1,975 ft.
Turner et al's No. 1 Borsig, 150 ft. from S of SE cor. G. Emig Sur. 130, 6 miles west of Paint Rock ..... Shut down 315 ft.

CRANE COUNTY

Duffey & Skelly's No. 1 University, 2,310 ft. from S, 330 ft. from E Sec. 45, Blk. 30, University Land ..... Top salt 1,015 ft.; swabbing 2,835 ft.
Gulf Prod. Co.'s No. 66 McElroy, 1,442 ft. from N and 4,950 ft. from W of Sec. 200, Blk. F, C.C.S.D.& R.G.N.G. ..... Drlg. 2,405 ft.
Gulf Prod. Co.'s No. 7 Waddell, Sec. 10, Blk. B-23, 2,640 ft. from S, 330 ft. from W ..... Top salt 1,108 ft.; slight show gas 2,285 ft.; 1,000,000 ft. gas at 3,065 ft.; top lime 2,972 ft.; shut down 3,610 ft.; 500 ft. water; making 3,000,000 ft. gas.
Gulf Prod. Co.'s No. 8 Waddell, 330 ft. N and W of SE cor. Sec. 2, Blk. B-24, school land ..... Location.
Humble Oil & Ref. Co.'s No. 1-D University, 2,310 ft. from N and 1,650 ft. from W Sec. 34, Blk. 30 ..... Shut down 2,550 ft.
Prairie Oil & Gas Co.'s No. 7 University, 330 ft. from N, 330 ft. from W Sec. 39, Blk. 30 ..... Location.
Prairie Oil & Gas Co.'s No. 8 University, 330 ft. from S, 330 ft. from W, Sec. 39, Blk. 30 ..... Shut down 2,885 ft.
Simms-Atlantic No. 10-A University, 2,310 ft. S and E Sec. 39, Blk. 30, Univ. ..... Location.
T. P. Coal & Oil Co.'s No. 2 University, 2,310 ft. from S, 1,650 ft. from W Sec. 34, Blk. 30, University Land .. Location.
Tidal Oil Co.'s No. 9 University-I, 1,320 ft. from E, 771 ft. from S. Sec. 43, Blk. 30 ..... Top salt 1,140 ft. drlg. 2,538 ft.
Church-Weekly's No. 3 Dowell-University, 990 ft. from S and W Sec. 39, Blk. 30 ..... Shut down 2,747 ft.
Warner-Quinlan's No. 4 Dowell-University, 990 ft. from S, 1,650 ft. from W Sec. 39, Blk. 30 ..... Drlg. 2,215 ft.
Warner-Quinlan's No. 5 University-Davis, 2,310 ft. from S and W Sec. 39, Blk. 30 ..... Drlg. 1,500 ft.

CROCKETT COUNTY

Eppenaur et al's No. 2 Noelke, 500 ft. N and 1,250 ft. E of SE cor. Sec. 64, Blk. 1, I.&G.N.R.R. Sur. ..... Shut down 650 ft.
Lewis & Daniels' No. 1 Pecos River Bed, 19 yards S and 37 degrees E of NW cor. Sec. 33, Blk. 1, I.&G.N. Sur. .. Shut down 1,135 ft.
W. W. Donnelly & Young's No. 1 Shannon, SW SW SE Sec. 42, Blk. BB, T.C.R.R. Sur. ..... Drlg. 930 f t.
W. W. Donnelly & Young's No. 1 Middlebuster, C Sec. 11, Blk. 9, D.&S.E. Sur. ..... 7,000,000 ft. gas at 1,663 ft.; shut down 1,755 ft.
Moncrief's No. 1 Andrews, 1,320 ft. from S, 1,170 ft. from W of Sec. 57, Blk. UV, G.C.&S.F.R.R. ..... Drlg. 740 ft.
W. A. Moncrief et al's No. 1 Massie, 1,170 ft. N and 1,320 ft. E of SW cor. Sec. 47, Blk. UV, G.C.&S.F. Sur. ..... 3,000,000 ft. gas 1,198 ft.; total depth 1,450 ft.; plugged back 1,441 ft. to pump; top pay 1,417 ft.; swabbed 30 bbls. oil; cleaning out after shot.
Moncrief's No. 3 Todd, 330 ft. from S and E Sec. 29, Blk. VV ..... Location.
Taylor-Link's No. 3 Powell, 1,000 ft. S of No. 2, Sec. 52, Blk. BB, E.L.&R.R. Sur. ..... Drlg. 633 ft.

CULBERSON COUNTY

Deep Rock Oil Co.'s No. 3 Kloh, 330 ft. N and 1,388 ft. W Sec. 39, Blk. 59 ..... Drlg. 300 ft.
Hickey & Stiver's No. 1 C. O. Finley, 600 ft. N and 1,980 ft. W Sec. 20, Blk. 82 ..... Small oil show 1,331 ft.; shut down 2,275 ft.; hole full water; elevation 3,874 ft.
West Coast Oil & Exploration Co.'s No. 1 McGregor, C NW Sec. 14, Blk. 81 ..... Total depth 720 ft.; straightening crooked hole.
Scott & Dittman's No. 1 Miller, 1,160 ft. N and 2,480 ft. E Sec. 1, Blk. 97, Public School Land ..... Rainbow 1,056 ft.; 300 ft. sulphur water 1,725 ft.; oil show 2,528 ft.; hole full sulphur water; drlg. 2,720 ft.

ECTOR COUNTY

Anderson's No. 1 fee, 1,320 ft. E along N line Sec. 19, and 150 ft. N at right angles with line Sec. 18, Blk. B-16, Public School Land ..... Location.

EL PASO COUNTY

Sillex's No. 1 Malone, 2,200 ft. SW and NW Sec. 46, J. M. Day, Sur. ..... Shut down 1,010 ft.

EDWARDS COUNTY

A. M. Griffith's No. 1 Wardlow, Sec. 60, V-8, J. C. Clift Sur. ..... Straightening crooked hole 2,400 ft.

FISHER COUNTY

Bickerstaff et al's No. 1 McWhirter, 2,640 ft. E and 150 ft. N of SW cor. of Sec. 295, Blk. 2, H.&T.C. Sur. .... Shut down 2,000 ft. for orders.
Cranfill & Reynolds' No. 1 Flanagan, 990 ft. from S and W of Sec. 200, Blk. 1, B.B.B.&C. Sur. ..... Drlg. 1,850 ft.
Magnolia Pet. Co.'s No. 1 Lee, Sec. 357, 2,310 ft. from N and 4,286 ft. from W ..... Drlg. 1,780 ft.
Mesa Oil Co.'s No. 1 Griffin, 349 ft. N and 465 ft. E of NE cor. Sec. 20, School Land ..... Shut down 2,985 ft.
Midwest Oil Co.'s No. 1 Steele, 660 ft. from S, 440 ft. from W Sec. 210, Blk. 1 ..... Location.
J. H. Riley's No. 1 Bloch, Sec. 4, Blk. 2, 250 ft. from N, 990 ft. from W, English Sur. ..... Location.
H. Riley's No. 1 J. H. Veatch, 250 ft. S and 990 ft. E of NW cor. Sec. 4, English Sur. ..... Location.
Roeser & Pendleton's No. 1 Johnson, 330 ft. from N, 3,870 ft. from W Sec. 71, Blk. 1, H.&T.C. ..... Drlg. 745 ft.
Roeser & Pendleton's No. 2 Haught, Sec. 191, Blk. 1, 590 ft. from N and 1,320 ft. from W ..... Underreaming 2,490 ft.
The Texas Company's No. 1-B Stephens, 330 ft. from N and W of S half SW Sec. 79, Blk. 1, H.&T.C.R.R. Sur. ..... Drlg. 510 ft.

GARZA COUNTY

Bell Thompson's No. 1 Tuffing, 330 ft. from S, 2,310 ft. from E Sec. 10, Blk. 6, H.&G.N. ..... Rig.
Emerald Oil Co.'s No. 1 J. C. Bargsley, 2,310 ft. from E and 330 ft. N of SW cor. Sec. 135, Blk. 5, H.&G.N. .. Drlg. 2,005 ft.
Gulf Prod. Co.'s No. 1 Street, C Sec. 7, Blk. 8, H.&G.N. R.R. Sur. ..... Drlg. 3,100 ft.
Paul Steed et al's No. 1 Boren, Sec. 136, Blk. 5, 330 ft. from N, 990 ft. from E, H.&G.N.R.R. Sur. ..... Location.

GLASSCOCK COUNTY

A. & F. Oil Co.'s No. 1 Turner, 2,310 ft. from N and 330 ft. from E Sec. 19, Blk. 33, Twp. 2s, T.&P. Sur. ..... T.D. 2,501 ft.; T.L. 2,075 ft.; O.S. 2,075-80 ft.; running 8-in. csg.
California Co.'s No. 1 Turner, 2,310 ft. from N and E Sec. 46, Blk. 33, Twp. 2s ..... Drlg. 1,473 ft.
Chas. Daniel et al's No. 1 Meek, 2,310 ft. W and 1,600 ft. N of SE cor. Sec. 7, Blk. 34, Twp. 3s. T.&P. Sur... Shut down 500 ft.
Gibson-Johnson's No. 1 Dean, 1,320 ft. S and E of NW cor. Sec. 2, Blk. 33, Twp. 2s, T.P.R.R. Sur. ..... Top salt 1,075 ft.; top lime 2,560 shut down 3,454 ft.
Houston Oil Co.'s No. 1 McDowell, 330 ft. from N and 2,310 ft. from E Sec. 30, Blk. 33, Twp. 2s ..... Drlg. 2,285 ft.
Kirby Pet. Co.'s No. 1 Phillips, Sec. 23, Blk. 33, Twp. 2s, 330 ft. from N and 2,310 ft. from W ..... Drlg. 1,956 ft.
Landreth and others' No. 1 Huston, Sec. 29, Blk. 35, Twp. 2s, 330 ft. from S, 2,310 ft. from E, T&P Sur.. Location.
Lion Oil & Ref. Co.'s No. 1 Coffee, 330 ft. from N and E Sec. 22, Blk. 33, Twp. 2s, T.&P.R.R. Sur. ..... Drlg. 324 ft.
Midwest Oil Co.'s No. 1 Edwards, 330 ft. from S, 2,259 ft. from E, Sec. 20, Blk. 34, T.&P.R.R. Sur. ..... Drlg. 1,180 ft.
Penn Oil Co.'s No. 1 Schaffer, 1,320 ft. from S, 2,640 ft. from E Sec. 4, Blk. 32, Twp. 3s, T.P.R.R. Sur. ..... Drlg. 1,080 ft.
Texas State Oil Co.'s No. 1 Coffey, 330 ft. from S and 990 ft. from E Sec. 19, Blk. 34, Twp. 2s ..... Drlg. 2,461 ft.
World Oil Co.'s No. 2-C McDowell, Sec. 21, Blk. 34, Twp. 2s, 330 ft. S and 2,310 ft. E of NW cor. ..... Building rig.

HOCKLEY COUNTY

World Oil Co.'s No. 1 Elwood, 320 ft. from N and W line, League 7, Wilbarger County School Land ..... Drlg. 2,880 ft. in shale and anhydrite.

HOWARD COUNTY

Amerada Pet. Corp.'s No. 2 Stewart, 330 ft. from S, 990 ft. from E Sec. 130, Blk. 29, W.&N.W.R.R. Sur..... Drlg. 1,175 ft.
Amerada Pet. Corp.'s No. 12 Roberts, 660 ft from S, 1,022 ft. from E. Section 128, Blk. 29 ..... Location.
California Co.'s No. 7 Roberts, 374 ft. S, 990 ft. E Sec. 137, Blk. 29, W.&N.W.R.R. Sur. ..... Shut down 1,825 ft.
O. Chalk's No. 4 fee, 1,650 ft. S and W of Sec. 124, Blk. 29, W.&N.W.R.R. Sur. ..... Drlg. 1,400 ft.
Cranfill & Reynolds' No. 2 Abrams, 243 ft. from W, 660 ft. N of No. 1 Sec. 3, Blk. 32, Twp. 2s ..... Drlg. 850 ft.
F. H. E. Oil Co.'s No. 11-B Dora Roberts, 1,700 ft. S and 2,310 ft. E of NW cor. Sec. 137, Blk. 29, W.&N.W. Sur. ..... Drlg. 2,535 ft.
Fuhrman Pet. Co.'s No. 1 Read, 2,310 ft. N and 330 ft. E of SW cor. Sec. 41, Blk. 32, Twp. 1n, T.&P.R.R. Sur... Top salt 935 ft.; drlg. 1,345 ft.

Gibson & Johnson's No. 1 Read, 660 ft. N and W of SE
Gulf Prod. Co.'s No. 6 Clay, 1,170 ft. from N and 150 ft. from W Sec. 155, Blk. 29, W.&N.W.R.R. Sur. ..... Drlg. 1,880 ft.
Howard Oil Corp.'s No. 2 Kloh et al, 990 ft. from S and E of NW Sec. 5, Blk. 32, Twp. 2s ..... Cleaning out 2,330 ft.
Howard Oil Corp.'s No. 3 Abrams, 990 ft. from N and 330 ft. from W of Sec. 5, Blk. 32, Twp. 2s, T.&P. R.R. Sur. ..... Shut down 2,040 ft.
Laurel Oil & Gas and Cosden Oil Co.'s No. 11 Roberts, 2,490 ft. N and 450 ft. W of SE cor. Sec. 136, Blk. 29, W.&N.W.R.R. Sur. ..... Location.
Laurel Oil & Cosden Oil Co.'s No. 13 Roberts, 1,700 ft. N and 330 ft. W of SE cor. Sec. 136, Blk. 29, W.&N.W.R.R. Sur. ..... Location.
Laurel Oil & Cosden Oil Co.'s No. 14 Roberts, 1,600 ft. N and 330 ft. W of SE cor. Sec. 136, Blk. 29, W.&N.W.R.R. Sur. ..... Location.
Magnolia Pet. Co.'s No. 13 Dora Roberts, 2,440 ft. N and 1,650 ft. E of SW cor. Sec. 136, Blk. 29, W.&N.W. Sur. ..... Shut down 2,927 ft.
Marland Prod. Co.'s No. 3 Clay-F, 250 ft. S and 660 ft. W of NE cor. Sec. 138, Blk. 129, W.&N.W.R.R. Sur. .. Shut down 2,675 ft. with show oil 2,595-2,675 ft.
McGinley & Seigler's No. 1 Barnett, 330 ft. S and E of NW cor. Sec. 928, Blk. 29, W.&N.W.R.R. Sur. ..... Cleaning out at 1,345 ft.; 600 ft. oil in hole.
McGinley et al's No. 2 Hyman, Sec. 92, Blk. 29, W.& N.W.R.R. Sur. ..... Rigging up.
Merriwether's No. 1 Smith, 150 ft. from S, 2,490 ft. from W Sec. 45, Blk. 33 ..... Shut down 425 ft.
Merrick-Bristow's No. 9 Roberts, 1,155 ft. from S, 220 ft. from W Sec. 137, Blk. 29, W.&N.W.R.R. Sur. ..... Drlg. 260 ft.
Merrick & Lamb's No. 8 Clay, 1,120 ft. from S, 1,100 ft. from E line of Sec. 126, Blk. 29, W.&N.W.R.R. Sur. ..... Shut down 1,671 ft.
Moody Oil Co.'s No. 16-B, 990 ft. from N, 330 ft. from W Sec. 137, Blk. 29, T.&P. ..... Drlg. 285 ft.
Moody Oil Co.'s No. 17-B, Sec. 137, Blk. 29, 1,650 ft. from N, 330 ft. from W, W.&N.W.R.R. ..... Spudding; shut down.
Moody Oil Corp.'s No. 21-B Roberts, Sec. 137, Blk. 29, 2,310 ft. from N and 990 ft. from W, W&NW Sur. .. Location.
Moody Oil Corp.'s No. 20-E, 1,650 ft. S, 2,310 ft. W of NE Sec. 136, Blk. 29, W.&N.W.R.R. Sur. ..... Location.
Moody Oil Co.'s No. 23-B, 990 ft. from N and W of Sec. 137, Blk. 29 ..... Location.
Moody Oil Co.'s No. 19-E Roberts, 190 ft. from N and 2,310 ft. from E Sec. 136, Blk. 29 ..... Location.
Owen & Sloan's No. 13 Roberts, 1,700 ft. from S and 330 ft. from E Sec. 136, Blk. 29, W.&N.W. ..... Drlg. 650 ft.
Owen & Sloan's No. 14 Roberts, 1,600 ft. from S, 330 ft. from E Sec. 136, Blk. 29, W.&N.W. ..... Location.
Plymouth Oil Co.'s No. 4 Abrams, 330 ft. from N and 1,650 ft. from W Sec. 5, Blk. 32, Twp. 2s ..... Drlg. 885 ft.
Pure Oil Co.'s No. 1 Scrivner, 990 ft. E, 330 ft. N of SW Sec. 4, Blk. 32, Twp. 2s, T.&P.R.R. Sur. ..... Total depth 2,302 ft.
Shell Pet. Corp.'s No. 1-B Settles, 1,650 ft. from S, 2,310 ft. from W Sec. 135, Blk. 29, W.&N.W.R.R. Sur. .... Shut down 100 ft.
Shell Pet. Corp.'s No. 1 Kloh-Rumsey, 2,310 ft. from S and 330 ft. from E Sec. 13, Blk. 33, Twp. 2s, T.& P.R.R. Sur. ..... Rigging up.
Shell Pet. Corp.'s No. 2-A Roberts, 1,320 ft. from N, 1,650 ft. from W Sec. 156, Blk. 29, W.&N.W.R.R. Sur. ..... Rigging up.
Simms Oil Co.'s No. 1 Clay, 330 ft. from S, 2,310 ft. from W Sec. 127, Blk. 29 ..... Rigging up.
Superior Oil Co.'s No. 14 Dora Roberts-B, 2,310 ft. E and 280 ft. S of NW cor. Sec. 127, Blk. 29, W.&N.W. of SW cor. Sec. 137, Blk. 29, W.&N.W.R.R. Sur. ..... Shut down 2,601 ft.
Ward Oil Co.'s No. 8 Roberts, 1,485 ft. from S, 220 ft. from W Sec. 137, Blk. 29 ..... Spudded and shut down.

HUDSPETH COUNTY

Western States Oil Co.'s No. 1 Lockhart & Roseborough, C SE Sec. 5, School Blk. 21 ..... Shut down 1,786 ft.
California Co.'s No. 1 University, 3,821 ft. N and 2,554 ft. E of SW cor. Sec. 19, Blk. E ..... Total depth 1,640 ft.; estimated 1,000 bbls. fresh water daily.
George Richardson's No. 1 Faxton, 2,640 ft. from N and W Sec. 9, Blk. 16 ..... Spudding.
Western States Oil Co.'s No. 1 Moore, C SE Sec. 16, Blk. 71, Twp. 6, T.&P. Sur. ..... Shut down 2,685 ft.; fishing job.
Western States Oil Co.'s No. 1 Gardner & Moseley, NE NW Sec. 12, Blk. 18 ..... Shut down 3,140 ft.; fishing.

IRION COUNTY

Baker & Hodges' No. 1 Tankersley, 1,320 ft. from S, 150 ft. from W Sec. 23, G.C.&S.F. ..... Drlg. 965 ft.
Crawford Oil Co.'s No. 1 Williams, 450 ft. from N, 150 ft. from W Subd. 8 ..... Spudded and shut down.
Kimbrough & Flinchbaugh's No. 1 Tankersley, 160 ft. S and 200 ft. W of NE cor. S half Sec. 712, Ford Willig Sur. ..... Show oil 1,318-29 ft.; total depth 1,335 ft.; averaging 60 bbls. daily 37 degrees gravity oil; shut in.
Pecos Valley Oil Co.'s No. 2 Stocks, Sec. 19, Blk. 3, 1,020 ft. from S and W, H.&T.C. Sur. ..... Fishing 1,200 ft.
Webb's No. 2 Nutt, 200 ft. from N and 711 ft. from E Subd. 5 ..... Drlg. 100 ft.
Kingwood Oil Co. et al's No. 1 J. D. Suggs, SE NW SE Sec. 19, Blk. 7, H.&T.C. Sur. ..... Drlg. 7,545 ft.
P. H. Williams' No. 1 Ash, C of Sec. 20, Washington County ..... Shut down 3,535 ft.

JEFF DAVIS COUNTY

J. K. Hughes Dev. Co.'s No. 2 Means, 1,622 ft. N line, 600 ft. W line Sec. 345, H.&T.C. Sur. ..... Show gas 3,271 ft.; fresh water 3,000-05 ft.; underreaming 5 3/16-in. casing; shut down 4,005 ft.; 600 ft. fresh water 4,000-26 ft.

JONES COUNTY

J. H. Adsit et al's No. 1 Swenson, C of NE of SE Sec. 193, B.B.B.&C. Sur. ..... Fishing casing at 1,441 ft.
Cosden & Herbert Oil Co.'s No. 1 Bickley, 320 ft. N and 310 ft. E of SW cor. S half NW Sec. 50, Blk. 18, T.&P. Sur. ..... Drlg. 1,990 ft.
Cosden-Herbert et al's No. 3 Bickley, 320 ft. N and W of SE cor. of S half NW Sec. 50, Blk. 18 ..... Spudded.
W. G. Clark et al's No. 1 Collins, 330 ft. S and E of NW cor. Sec. 29, Blk. 18, T.&P.R.R. Sur. ..... Drlg. 1,465 ft.
Humble Oil & Ref. Co.'s No. 2 Bickley, 330 ft. S and W of NE cor. of SW Sec. 50, Blk. 18, T.&P.R.R. Sur. ..... Drlg. 1,350 ft.
McGinley Corp.'s No. 1 Whittemore, 660 ft. N and W of SE cor. SE NE Sec. 39, B.B.B.&C. ..... Drlg. 2,700 ft.
McNeeley et al's No. 1 Roscoe Bland, 1,175 ft. N and 240 ft. W of SE cor. Subdivision 20, A-164, DeWitt Co. School Land ..... Spudded and shut down.
Phillips Pet. Corp.'s No. 2 M. C. Lan, 990 ft. from N and W line Sec. 15, Blk. 19, T.P.R.R. Sur. ..... Drlg. 2,350 ft.
Sedgwick Oil & Gas Co.'s No. 1 Brown, 660 ft. N and 1,320 ft. E of SW cor. Sec. 9, Blk. 1, T.&N.O. Sur. .... Temporarily abandoned location.
Texas Pacific Coal & Oil Co.'s No. 1 Smith, 1,822 ft. S and 2,043 ft. E of SW cor. Sec. 51, Blk. 18, T.&P. .. Drlg. 1,730 ft.
The Texas Company's No. 2 Camp, 2,829 ft. N and 323 ft. W of SE cor. Camp. 189.5-acre lease, Sec. 13, T.&P. Sur., Blk. 19 ..... T.P. 2,525-30 ft.; T.D. 2,533 ft.; Estimated 50 bbls.
The Texas Company's No. 3 Camp, 1,189 ft. S and 326 ft. W of NE cor. of Sec. 13, Blk. 19, T.&P. ..... Straightreaming at 2,390 ft.; TD 2,575 ft.

KIMBLE COUNTY

C. L. Bryant and others' No. 1 Lambert, 700 ft. from N and W line of F. Lotta Sur. ..... Drlg 335 ft.
Lindsay Bros.' No. 1 Anderson, Sec. 167, 1,320 ft. from N and E ..... Shut down 965 ft.
McLean & Jamison's No. 1 Cannon, 1,940 ft. N and 300 ft. W of SE cor. Robert Cochran Sur. ..... Shut down 1,140 ft.

LOVING COUNTY

Lockhart & Co.'s No. 2 Bowen-Wells, 990 ft. NW and 330 ft. SE Sec. 92, Blk. 1, W.&N.W.R.R. Sur. ..... Top salt 725 ft.; Drlg. 3,475 ft.
Lockhart & Co.'s No. 1 Hayzell, 2,792 ft. SW of NE line and 660 ft. NW of SE line Sec. 84, Blk. 33, H.&T.C. R.R. Sur. ..... Top salt 700 ft.; drlg. 3,805 ft.
Lockhart & Co.'s No. 1 Wheat-H, 990 ft. from NE and SE lines Sec. 85, Blk. 33, H.&T.C.R.R. Sur. ..... Top salt 720 ft.; set 8¼-in. casing 2,295 ft.; show oil 4,147 ft.; swabs 10 bbls. per day; total depth 4,197 ft.; shot 110 quarts 4,150-80 ft.; flowing 2 bbls. salt water hourly; averaging 10 bbls. oil per day on swab; cleaning out.

LYNN COUNTY

George McCamey's No. 1 Edwards, 165 ft. N and E Sec. 5, Blk. 2, L.S.&W. Sur. ..... Top salt 2,140 ft.; oil show 1,580-90 ft.; cem. 8¼-in. casing 2,500 ft.; shut down 3,795 ft.

MENARD COUNTY

J. C. Barnett's No. 2 Callan, Sec. 1, 1,050 ft. from S. 1,190 ft. W ..... Location.
Cromwell & Duffey's No. 1 Winslow, C SE Sec. 32, T.&N.O. Sur. ..... Drlg. 1,905 ft.

MIDLAND COUNTY

Phillips Pet. Corp.'s No. 1 Stokes, 440 ft. S and W of NE cor. S. Beall Sur. No. 101, Blk. 37, Twp. 2s, T.P.R.R. Sur. ..... Top salt 1,610 ft.; top lime 3,720 ft.; 1,500 ft. fluid in hole; total depth 4,260 ft.; run 6-in. casing; 2,000 ft. salt water in hole 4,200 ft.; drlg. 4,330 ft.
Shoupe et al's No. 1 Roy Parks, 1,320 ft. N and W Sec. 34, Blk. 41 ..... Top lime 4,744 ft.; shut down 4,980 ft.; to deepen.

MITCHELL COUNTY

California Co.'s No. 7 Foster, Lease No. 1, Sec. 6, Blk. 29, Twp. 1s, T.P.R.R. ..... Set 8-in. casing 1,632 ft.; shut down 2,387 ft.
California Co.'s No. 1 Handley, 2,310 ft. from S, 1,650 ft. from E Sec. 1, Blk. 28, Twp. 1n, T.&P. Sur. ..... Shut down 2,780 ft.
Seiger's No. 1 Scott, C of NE of SW Sec. 36, Blk. 17, S.P.R.R. Sur. ..... Shut down 730 ft.
Republic Prod. Co.'s No. 1 Scott, 330 ft. N and E of SW Sec. 20, Blk. 17, S.P.R.R. Co. ..... Drlg. 3,035 ft.
Simms Pet. Co.'s No. 1 Elwood, C SE of Sec. 29, Blk. 18, S.P.R.R. Sur. ..... Set 5-in. casing 4,427 ft.; cementing core 4,640 ft.
Teas & Wheeler's No. 1 Radford, 1,320 ft. N and W of Sec. 1, Blk. 27, T.&P. Sur. ..... Drlg. 4,100 ft.
Westyde Investment Co.'s No. 1 Elwood, C SW Sec. 38, Blk. 16, S.P.R.R. Sur. ..... Top lime 1,290 ft.; drlg. 3,060 ft.

NOLAN COUNTY

L. G. Bradstreet et al's No. 1 Kuteman, C NW Sec. 95, Blk. X, T.&P. Sur. ..... 2,500 ft. water in hole; drlg. 3,542 ft.
Phillips Pet. Co.'s No. 1 Plunkett, 330 ft. N and W of SE cor. NW Sec. 66, Blk. 23, T.&P. Sur. ..... Drlg 3,300 ft.

PECOS COUNTY

California Co.'s No. 19 Yates, Lease No. 1, Sec. 34, Blk. 194, 1,042 ft. from N and 1,919 ft. from E, G.C. & S.F. ..... Rigging up.
California Co.'s No. 20 Yates, Lease No. 1, 1,042 ft. from N, 2,591 ft. from W Sec. 34, Blk. 194, G.C. &S.F. ..... Drlg. 495 ft.
Cosby's No. 2 Smith, Sec. 24, Blk. 194, 1,650 ft. from N, 330 ft. from E, G.C.&S.F.R.R. Sur. ..... Drlg. 1,030 ft.
Cowboy Evans' No. 1 Pecos Valley, 2,310 ft. from NW line, 990 ft. from SW line of Sec. 36, Blk. 3, H.&T.C. R.R. Sur. ..... Drlg 780 ft.
Crowey's No. 1 Heiner, 2,400 ft. each way from N and E lines Sec. 589, G.C.&S.F.R.R. Sur. ..... Shut down 1,288 ft.
Clayton Williams' No. 1 Sanford, 160 ft. from NW line, 1,150 ft. from SW line Sec. 55, Blk. 10, H.&G.N. ..... Shut down 1,285 ft.
Gibson-Johnson's No. 1 Grace, 330 ft. N, 990 ft. from E Sec. 3, Blk. 179 ..... Drlg. 1,720 ft.
Humble Oil & Ref. Co.'s No. 7-B Yates, 275 ft. from S, 2,679 ft. from W Sec. 101, T.C.R.R. Sur. ..... Drlg. 770 ft.
Independent Oil & Gas Co.'s No. 1 Iowa Realty Trust Co., 2,310 ft. each way NE SE line Sec. 23, Blk. 10, H.&G.N.R.R. ..... Drlg. 1,707 ft.
Jayhawk Oil Co.'s No. 1 Price, 1,310 ft. from W, 330 ft. from S, Sec. 6, Blk. 12, H.&G.N.R.R. Sur. ..... Spudded and shut down.
J. L. Kennedy's No. 1 Roberts, C of Sec. 78, Blk. 3, T.&P.R.R. Sur. ..... Location.
Sam Kitts and others' No. 1 Sherbino, 330 ft. from N and 990 ft. from W line Sec. 52, Blk. C-4, G.C.&S.F. R.R. ..... Shut down 1,010 ft.
Landreth's Prod. Co.'s No. 1 University, 330 ft. from N and W lines of E half of SE Sec. 13, Blk. 13, University Land ..... Shut down 125 ft.
Seminole Oil Co.'s No. 1 Pecos Valley, Sec. 22, Blk. 10, 360 ft. from SW, 2,280 ft. from SE, H.&G.N. Sur. ..... Location.
Marland Oil Co.'s No. 1 University, Sec. 10, Blk. 17, 1,620 ft. from N, 1,020 ft. from E ..... Drlg. 1,010 ft.; top salt 950 ft.
Mauch & Kroger's No. 1 Holmes, Sec. 5, Blk. 178, T.C. Sur. ..... Shut down 1,442 ft.
McMan Oil & Gas Co.'s No. 3 Richardson, Sec. 108, 370 ft. N, 800 ft W of SW cor. Runnels County School Land ..... Location.
McMan Oil & Gas Co.'s No. 4 Tippett, 370 N and 800 ft. W of SW cor. Sec. 108, Blk. 194, CC&SF Sur .... Location.
R. E. Moore's No. 1 Arnold, 1,320 ft. from S and 660 ft. from E lines of Sec. 18, Blk. 1, H.&T.C.R.R. ..... Drlg. 800 ft.
Moncrief et al's No. 1 Tippett, 330 ft. from S, 330 ft. E of C Sec. 36, Blk. 12, H.&G.N. ..... Location.
W. A. Moncrief et al's No. 2 Tippett, 330 ft. from S and E lines of W half of Sec. 36, Blk. 12, H.&G.N. R.R. Sur. ..... Location.
Moncrief et al's No. 1 Toborg, 330 ft. from S, 330 ft. W of C of Sec. 539, Blk. 1 ..... Drlg. 295 ft.
Moncrief et al's No. 1 University, 1,470 ft. from N and 150 ft. from E Sec. 27, Blk. 13, University Land ..... Spudding.
Moncrief et al's No. 2 University, 330 ft. from N, 2,310 ft. from W line of Sec. 13, Blk. 13, University Land... Total depth 915 ft.; 15,000,000 ft. gas.
J. D. OMara's No. 1 Bennett, Sec. 592, 1,460 ft. from S, 150 ft. from E, G.C.&S.F. ..... Drlg. 295 ft.
J. D. O'Mara's No. 1 Streety, C of Sec. 1, W. P. Howard Sur. ..... Drlg. 150 ft.
Pecos Crude Oil Pur. Co.'s No. 3 Pecos Valley, 990 ft. from NW, 1,650 ft. from SW Sec. 22, Blk. 10 ..... Drlg. 540 ft.
Perrin et al's No. 1 Eaton, 150 ft. each way from NE and NW lines Sec. 27, Blk. 39, H.&T.C. Sur. ..... 18,000,000 ft. gas 1,490-1,502 ft.; spraying salt water from behind 8¼-in. casing set at 1,180 ft.; shut down 1,502 ft.; 5 3/16-in. casing set on bottom with last joint perforated; 18,000,000 ft. gas shut in.

Perren's No. 1 Peterson, 150 ft. from NW, 150 ft. from SW Sec. 34, Blk. 10, H.&T.C. ..... Drlg. 640 ft.
Phillips Pet. Corp.'s No. 2 Monroe, 990 ft. from N and E of Sec. 39, Blk. 194, G.C.&S.F. Sur. ..... Drlg. 990 ft .
Phillips Pet. Corp.'s No. 1 Pryor, 440 ft. S and E of NW cor. Sec. 78, Blk. OW, T.M.R.R. Sur. ..... Top pay 1,345 ft.; 400 ft. oil in hole; underreaming 2,230 ft.
Phillips Pet. Corp.'s No. 2 Courtney, Sec. 78, Blk. OW, 220 ft. from N and W ..... Location.
Rowen & Tong's No. 1 McDonald, 1,170 ft. from N and 2,490 ft. from E Sec. 46, Blk. 2, H.&G.N. ..... Drlg. 890 ft.
Seminole Oil Co.'s No. 1 Cordova, 330 ft. from S and 2,434 ft. from E line of Sec. 51, Blk. 11, H.&G.N. ..... Location.
B. J. Spikes' No. 1 George Brown, 2,490 ft. SE and SW line Sec. 8, Blk. 3 ..... Show oil 1,180-90 ft.; shut down 2,257 ft.
Schumaker et al's No. 1 Williams et al, 330 ft. N of middle of S line Sec. 1, Blk. 117, G.C.&S.F. ..... Drlg. 1,410 ft.; hole full sulphur water 1,303 ft.
Shell Pet. Corp.'s No. 1 Jackson, 330 ft. NW of SE line and 330 ft. NE of SW line, Sec. 28, Blk. S, H&TC Sur ..... Location.
Shell Pet. Corp.'s No. 1-B University, 1,650 ft. from S and 330 ft. from W Sec. 30, Blk. 16, University Land .. Rigging up.
Southern Crude O. P. Co.'s No. 1 Jackson T-139, Sec. 28, Blk. 3, 1,487 ft. from NE, 2,518 ft. from SE cor. ..... Location.
Talbot and others' No. 1 Unsicker, 150 ft. each way from NE and SE cor. line of Sec. 25, Blk. 10, H.&G.N. Sur. ..... Material on ground.
Texas-Phillip's No. 1 Campbell, 1,320 ft. from SW, 330 ft. from SE, Sec. 46, Blk. 10, H.&G.N. ..... Shut down 1,380 ft.
Taylor-Link's No. 2 University, 330 ft. from N and W of Sec. 31, Blk. —, University ..... 50 bbls. daily 935 ft.
Tidal Oil Co.'s No. 2 University, 2,970 ft. from N, 2,310 ft. from E Sec. 3, Blk. 18, University Land ..... Drlg. 130 ft.
Tidal Oil Co.'s No. 3 University, 2,310 ft. from S and 1,650 ft. from E Sec. 17, Blk. 20, University Land .... Rigging up.
Tower & McKenna's No. 1 University, 330 ft. from S and EL line of Sec. 3, Blk. 17 ..... Location.
Transcontinental Oil Co.'s No. 1 University, NE NW SW Sec. 18, Blk. 18 ..... Top lime 1,155 ft.; fishing 4,312 ft.; total depth 4,407 ft.
Trees Oil Co.'s No. 2 Trees, 330 ft. from N and W of SE cor. Sec. 43, Blk. 8, H.&G.N.R.R. Sur. ..... Location.
R. D. Webb's No. 1 fee, 1,900 ft. from E and 1,420 ft. N of SW cor. Sec. 105, Blk. OW ..... Shut down 467 ft.
World Oil Co.'s No. 1 University, 330 ft. from N and 2,310 ft. from E of Sec. 31, Blk. 16, University Land .. Rigging up.
World Oil Co.'s No. 1-B University, 330 ft. from N and E Sec. 13, Blk. 18 ..... Spudding.

PRESIDIO COUNTY

L. C. Brite's No. 4 Brite, 271 ft. from N, 1,188 ft. from E Sec. 245, Blk. 4 ..... Shut down 670 ft.
Eastland Oil Co.'s No. 1 Tootle, C Sec. 17, Blk. 1, D.P. R.R. Sur. ..... Spudded; shut down.
Phillips Pet. Co., Empire G. & F. Co., Delmar Co. and C. E. Miller's No. 1 Tootle Est., C NE Sec. 75, Blk. 3, D.&P.R.R. Sur. ..... Slight oil show and gas at 2,707 ft.; show oil at 2,767 ft.; shut down 3,500 ft.
T. P. Coal & Oil Co.'s No. 1 Bogel, 330 ft. S and W, Sec. 83, Blk. 8, G.H.&S.A. ..... Rig.

REAGAN COUNTY

Big Lake Oil Co.'s No. 1-C University, 2,598 ft. S and 250 ft. W of NE cor. Sec. 1, Blk. 2, University Land .. Drlg. 3,135 ft.
Kemrow Co.'s No. 1 Sawyer Cattle Co., 1,320 ft. from N and 1,980 ft. from E line Sec. 8, J. G. Robinson Sur. ..... Location.

REEVES COUNTY

Exploration Co.'s No. 1 A. A. Kinney, 1,500 ft. W of NE cor. Sec. 26, Blk. C-18, Public School Land, elev. 2,847 ft. ..... Shut down 2,900 ft.; pipe out.
H. T. Hansford's No. 1 Williams, 150 ft. from S and W Sec. 17, Blk. 6, H.&G.N. ..... Spudded and shut down.
Earl Kenby's No. 1 Brooks, 1,980 ft. N and 660 ft. W Sec. 16, Blk. 59 ..... Running 12-in. csg. 325 ft.
Southern Crude O. P. Co.'s No. 1 Kloh-Rumsey, 2,310 ft. N and W SE cor. Sec. 23, Blk. 51 ..... Hole full water 1,275 ft.; cem. 12½-in. casing 1,463 ft.; shut down 1,535 ft. for orders; pipe parted, water broke in; skidded 75 ft. west; running 8-in. csg. T.D. 1,710 ft.
David R. Thompson's No. 1 A. A. Eddins, Sec. 9, Blk. C-1 ..... Fishing casing 5,658 ft.; underreaming 8¼-in. casing.

RUNNELS COUNTY

Herbert Oil Co.'s No. 1 Currie, 1,866 ft. SE of NW line, 335 ft. SW of NE line Gray Carroll Sur. ..... Shut down 2,140 ft.
Independent Oil & Gas Co.'s No. 1 Will Rollwitz, 330 ft. S and W of NE cor. S half M. Salinas Sur. No. 20½ .. Drlg. 4,153 ft.; hole full salt water.
McLean et al's No. 1 G. W. Clayton, 150 ft. N line, 270 ft. from W line Sec. 135, E.T.R.R. ..... Shut down 1,185 ft.
Vacuum Oil Co.'s No. 4 McMillan, 555 ft. S and 717 ft. W of NE cor. Lot 22, Domingo Diaz Sur., No. 532 .... Location.

SCHLEICHER COUNTY

Fort McKavet's No. 1 Tisdale, Sec. 1,499, River Section, 3,630 ft. from S, 150 ft. from W ..... Set 6-in. casing 3,023 ft.; drlg. 3,430 ft.
Interstate's No. 1 Whitten, 1,320 ft. from N and W Sec. 35, Blk. LL, T.C.R.R. Sur. ..... Drlg. 4,137 ft.; 700 ft. oil and water in hole.
Underwood's No. 1 Tisdale, 2,095 ft. N and 1,185 ft. from E Sec. 74, Blk. LL ..... Spudded and shut down.

SCURRY COUNTY

Camp Spring Oil & Ref. Co.'s No. 3 Guinn, 1,300 ft. from S, 300 ft. from E Sec. 12, Blk. 3, H.&T.C.R.R. Sur. ..... Rig.
Cottingham & Briscoe's No. 1 Trees, C SE Sec. 147, Blk. 97 ..... Spudding.
I. B. Mimms et al's No. 1 J. J. Koonsman, Sec. 216, Blk. 2, H.&T.C. Sur ..... Spudded and shut down 300 ft.
G. E. Dickman and R. B. Pender et al's No. 1 F. C. Davis, 1,000 ft. N and 1,770 ft. W of SE cor. of Sec. 275, Blk. 2, H.&T.C. Sur. ..... Drlg. 3,400 ft.
Texas-Canadian's No. 1 Moore, 1,320 ft. from S and W Sec. 379, Blk. 97 ..... Location.

SUTTON COUNTY

Phillips Pet. Co.'s No. 1 A. G. Holman, 2,310 ft. S and 330 ft. W NE cor. Sec. 25, G.C.S.D.&N.G.R.R. Sur. .... Fishing 6,635 ft.; making 1,500,000 ft. gas 6,635 ft.
L. G. Priest's No. 1 Allison, 1,320 ft. N and E of SW cor. Sec. 52, Blk. A, T.&P. Sur. ..... Set 15-in. casing 530 ft.; shut down 3,250 ft.

TAYLOR COUNTY

Dunnigan & Shell Pet. Corp.'s No. 1 Davidson, 2,811 ft. S and W of NE cor. S half of W. R. Willis Survey No. 122 ..... Location.
V. B. Jameson's No. 1 Webb, 1,170 ft. S and W of NE cor. Sec. 46, Lunatic Asylum Land ..... Drlg. 4,575 ft.
Magnolia Pet. Co.'s No. 1 Hammer ..... Drlg. 3,000 ft.
Mid-Continent Oil & Gas Co.'s No. 1 Cody, 330 ft. N and E of SW cor. M. E. Cody 116.7-acre tract, Guadalupe County School Land ..... Drlg. 1,535 ft.
Root Drlg. Co.'s No. 1 Martin, 990 ft. E and 1,650 ft. N of SW cor. Sec. 20, Blk. 19, T.&P.R.R. Sur. ..... Drlg. up pipe; total depth 2,475 ft.

TERRELL COUNTY

Big-Bend Oil Co.'s No. 1 Bassett, C NW Sec. 155, Blk. D, M.K.&T.E.R.R. Sur. ..... Drlg. 750 ft.
Keck Pecos Trust Co.'s No. 1 Hamilton, C Sec. 6, Blk. D-7, E.L.R.R. Sur. ..... Drlg 2,575 ft.
Mrs. J. B. McPhee's No. 1 Sam Belt, C Sec. 78, Blk. D-7, E.L.&R.R. Sur. ..... Shut down 850 ft.
Milham Exploration Co.'s No. 1 Bassett, Sec. 76, Blk. Y, W. E. Robertson Sur. ..... Cem. 6⅝-in. casing 3,986 ft.; drlg. 5,255 ft.
Woodley & Jones' No. 1 Pankenham, C SE NW Sec. 43, Blk. B-2, C.C.S.D.&N.G.R.R. Sur. ..... Shut down 625 ft.

TERRY COUNTY

Kingsland O. P. Co.'s No. 1 Brownfield, C NW SW SW Sec. 7, Blk. 1-A, E.L.R.R. Sur. ..... Fishing bailer 5,080 ft.

TOM GREEN COUNTY

Cannon and others' No. 1 Rust, 990 ft. S, 990 ft. W of NE cor. of Sec. 745 ..... Rig.
Fitzgerald & Taliaferro's No. 1 Bennett, C SW Sec. 1,628, E. H. Ringer ..... Shut down 1,920 ft.
Fuhrman Pet. Co.'s No. 1 Wardlaw, 2,650 ft. from N and E of Sec. 6, Blk. 17, E.&T.C. ..... Location.

UPTON COUNTY

Dixie Oil Co.'s No. 30 Burleson, 990 ft. from N and 2,640 ft. from E Sec. 2, John Nidever ..... Drlg. 520 ft.
Prairie Oil & Gas Co.'s No. 1 Quatters, 330 ft. from S and 1,980 ft. from W, C. C. Dewitt Sur. ..... Rig.
Pure Oil Co.'s No. 1 Hughes, 150 ft. from SW, 150 ft. from N Sec. 4, William Teer Sur. ..... Drlg. 1,565 ft.

YOAKUM COUNTY

Weekly Oil Corp.'s No. 1 Knight, C NW Sec. 791, Blk. D, John Gibson Sur. ..... Shut down 1,960 ft.

VAL VERDE COUNTY

Independent Operators' No. 1 Whitehead, SE SE Sec. 30, Blk. 4, I.&G.N. Sur., elev. 1,175 ft. ..... Shut down 4,850 ft.
O. O. Owens' No. 1 Mills, Sec. 128, Blk. 1, I.&G.N. Sur., elev. 2,130 ft. ..... Gas sand 2,491-2,520 ft.; tested 125,750 ft. gas; reset 8-in. 2,511 ft.; cleaning out 4,210 ft.
Producers Oil Co. et al's No. 1 Everett Bros., 2,310 ft. S and 330 ft. E of NW cor. Sec. 40, Blk. DB, C.C.S.D.&R.G.N.G. Sur. ..... Fishing 2,510 ft.
Dyar Bros. et al's No. 1 Wilson, 6,830 ft. N NE cor. Sec. 1, T.&P. Sur., thence 1,680 ft. E Sec. 115, Blk. E, G.C.&S.F. Sur. ..... Drlg. 2,100 ft.
Valvert Oil Corp.'s No. 1 Bassett, C NE Sur. 47, Blk. Y.. Set 15½-in. casing 767 ft.; set 10-in. casing 1,510 ft.; shut down 3,900 ft.

WARD COUNTY

Atlantic & Delmar's No. 3 Hayzlett, 150 ft. each way from E cor. of S of W of Sec. 17, Blk. 5, H.&T.C. R.R. Sur. ..... Top salt 727 ft.; drlg. 2,300 ft.
C. C. Dorr et al's No. 1 Costley, 1,722 ft. from NW, 990 ft. from NE line of Sec. 2, Jos. Howe Sur. ..... Location.
Continental Oil Co.'s No. 2 Sealey, 330 ft. S and W Sec. 81, Blk. A, G.M.M.B.&A. Sur. ..... Building rig.
Gulf Prod. Co.'s No. 2 Hutchins, 330 ft. N and E Sec. 7, Blk. O ..... Top salt 1,240 ft.; top pay 2,529 ft.; 3,000,000 ft. gas; rebuilding rig; coring 2,628 ft; no change.
Barstow Oil & Gas Co.'s No. 1 Monroe, Sec. 50, Blk. 33.. Spudded and shut down.
Gulf Prod. Co.'s No. 6 O'Brien, 2,310 ft. from N, 330 ft. from E Sec. 20, Blk. F, G.M.M.B.&A. Sur. ..... Drlg. 880 ft.
Gulf Prod. Co.'s No. 2 Wristen, 220 ft. NW, 1,470 ft. SW Sec. 18, Blk. 5, H.&T.C. ..... Drlg. 1,835 ft.
Kemper-Kimberlin's No. 1 Thompson, 1,470 ft. NE, 150 ft. NW Sec. 15, Blk. 5 ..... Location.
E. B. Lovelace et al's No. 1 Redman, 1,980 ft. NE of SW line and 1,980 ft. SE of NW line, Sec. 162, Blk. 34, E.&T.C.R.R. ..... Total depth 760 ft.; fishing.
Marland Oil Co.'s No. 1 Sealey, 330 ft. S and W of Sec. 81, Blk. A, G.M.M.B.&A. ..... Location.
Penn & Atlantic's No. 1 Pecos Mercantile Co., Sec. 16, Blk. 34 ..... Shut down 575 ft.
Ramsower and others' No. 1 Boogher, 1,980 ft. NE and SE of Sec. 11, Blk. 5, H.&T.C. ..... Spudded and shut down.
Shipley's No. 2 Hayzlett, 220 ft. SE and 1,570 ft. SW Sec. 17, Blk. 5, H.&T.C.R.R. Sur. ..... Top salt 795 ft.; cementing 6-in. csg. 2,302 ft.
Shipley et al's No. 1 Monroe, 330 ft. SE SW Sec. 3, Blk. 1 ..... Total depth 150 ft.; running 15-in. csg.

WINKLER COUNTY

American Maracaibo Co.'s No. 2 Hendricks-B, 1,980 ft. N and 1,650 ft. E of SW cor. Sec. 28, Blk. B-5 ..... Cem. 12½-in. casing 170 ft.; top lime 2,599 ft.; top pay 2,731 ft.; 3,000 ft. oil; increase 2,875 ft.; show water 2,928-31 ft.; running 6-in. csg. 2,945 ft.; total depth 3,416 ft.
V. T. Bolin's No. 2 Brown et al, 2,000 ft. S and W of NE Sec. 4, Blk. B-5, Public School Land ..... Top salt 1,300 ft.; total depth 2,420 ft.; shut down for 8-in. casing.
Cranfill & Pickrell's No. 2 Hutchins, 2,310 ft. S and W Sec. 47, Blk. 26 ..... Rig .
Flandell Oil Co.'s No. 1 Carter, 640 ft. N, 2,230 ft. E of SW cor. Sec. 26, Blk. B-3 ..... Location.
Gulf Prod. Co.'s No. 2-B Lum Daugherty, 2,310 ft. from N and 1,320 ft. W Sec. 22, Blk. 26, P.S.L. ..... Drlg. 258 ft.
Gulf Prod. Co.'s No. 1 Clapp, 330 ft. S and W Sec. 37, Blk. 26 ..... Top lime 2,297 ft.; cem. 8¼-in. casing 2,302 ft.; total depth 2,468 ft.; tested 2,500,000 ft. gas.
Gulf Prod. Co.'s No. 3 Hendricks, 330 ft. from N and 310 ft. W Sec. 44, Blk. 26, Public School Land ..... Top salt 1,961 ft.; set 12½-in. casing 664 ft.; cementing 8¼-in. csg. 2,882 ft.
Humble Oil & Ref. Co.'s No. 13-C Hendricks, 440 ft. from S, 330 ft. from W Sec. 10, Blk. B-12. ..... Drlg. 1,226 ft.
Humble O. & R. Co.'s No. 14 Hendricks-C, 440 ft. N and 1,320 ft. E of SW cor. Sec. 10, Blk. B-12, School Land ..... Location.
Kermit Dev. Co.'s No. 1 Carter, 640 ft. S, 2,227 ft. W Sec. 27, Blk. B-3 ..... Shut down 400 ft. to cure title.
Liner Drlg. Co.'s No. 1 Campbell, 330 ft. from N and E cor. Sec. 2, Blk. B-5 ..... Total depth 1,050 ft.
Magnolia Pet. Co.'s No. 2 Scarborough, 1,620 ft. N and 990 ft. W SE cor. Sec. 1, Blk. C-22 ..... Top salt 1,125 ft.; gas show 2,825 ft.; running 8¼-in. casing 2,825 ft.; drlg. 2,979 ft.; flowing 130 bbls. daily.
Marland Oil Co.'s No. 1 Morton-A, 330 ft. N and E of Sec. 16, Blk. B-12 ..... Cem. 12-in. casing 409 ft.; drlg. 2,239 ft.
Shell-Llano Oil Co.'s No. 7 Scarborough, 1,020 ft. from N and W Sec. 2, Blk. 77 ..... Drlg. 200 ft.
Skelly Oil Co.'s No. 3 Daugherty, 330 ft. W, 1,650 ft. S Sec. 22, Blk. 26, Public School Land ..... Top lime 2,440 ft.; cementing 8-in. casing 2,469 ft.
Skelly Oil Co.'s No. 4 Daugherty, 990 ft. S, 330 ft. W Sec. 22, Blk. 26 ..... Top lime 2,476 ft.; cementing 8-in. casing 2,484 ft.; drlg. 2,550 ft.
Skelly Oil Co.'s No. 5 Daugherty, 1,326 ft. W, 2,310 ft. S Sec. 22, Blk. 26 ..... Location.
Southern Crude O. P. Co.'s No. 4 Hendricks T-88-CX, 1,375 ft. N, 330 ft. E Sec. 21, Blk. 26 ..... Cementing 8-in. csg. 2,529 ft.
Southern Crude O. P. Co.'s No. 2 Hendricks T-89-L, 440 ft. from N and 1,320 ft. from W Sec. 15, Blk. B-12.. Building rig.
Southern Crude O. P. Co.'s No. 4 Hendricks T-90, 2,310 ft. S and E of Sec. 47, Blk. 26 ..... Location.
Texas Canadian Oil Co.'s No. 1 Kloh-Rumsey, 1,320 ft. N and E of SW cor. Sec. 35, Blk. 46, T.&P.R.R. Sur.. Shut down 4,011 ft. for orders.

GULF COAST FIELDS AND WILDCATS

(Continued from Page 59)

Humble & Valley's No. 4 Walton ..... Rig.
Humble & Valley's No. 4 Thompson ..... Drlg. sand and shale 3,557 ft.
Humble & Valley's No. 3 Dietrichs ..... Comp. flowing 371 bbls. oil 3,500 ft.
Humble & Valley's No. 4 Dietrichs ..... Drlg. hard sand 991 ft.
Humble & Valley's No. 1 Jackson ..... Drlg. shale 2,542 ft.
Humble & Valley's No. 4 Austin College ..... Drlg. shale 3,793 ft.
Humble & Valley's No. 1 Graneau ..... Location.
Humble & Valley's No. 2 Bellville School ..... Drlg. shale and lignite 3,120 ft.
Humble & Valley's No. 2 Woodley ..... Drlg. shale and lime 2,045 ft.
Humble & Valley's No. 2 Mueller ..... Drlg. plug 3,148 ft.
Humble & Valley's No. 2-A Grawunder ..... Rig.
Humble & Valley's No. 1-B Mitchell ..... Drlg. hard sand 2,816 ft.
Humble & Valley's No. 3 Reese ..... Drlg. shale and shell 3,132 ft.
Humble & Valley's No. 4 Gotosky ..... Waiting cement to set 1,211 ft.
Humble & Valley's No. 1 Keacheker ..... Drlg. shale and lime 934 ft.
Humble & Valley's No. 2 Sherrill ..... Derrick.
Humble & Valley's No. 1 Krauaiiski ..... Drlg. shale and lime 814 ft.

DE WALT—FORT BEND COUNTY

Humble Oil & Refg. Co.'s No. 5 Nelson ..... Drlg. rock 711 ft.
Humble Oil & Refg. Co.'s No. 5 Camp ..... Drlg. shale and lime 1,665 ft.
Humble Oil & Refg. Co.'s No. 7 Brazos ..... Blew out and caught fire 3,000 ft.; killed gas.
Humble Oil & Refg. Co.'s No. 8 Brazos ..... Rig.
Humble Oil & Refg. Co.'s No. 9 Brazos ..... Rig.
Humble Oil & Refg. Co.'s No. 1-B Deatherage ..... Drlg. salt 4,471 ft.
Humble Oil & Refg. Co.'s No. 3 Hamner fee ..... Location.
Humble Oil & Refg. Co.'s No. 5 Hamner fee ..... Drlg. sticky shale 3,196 ft.
Humble Oil & Refg. Co.'s No. 6 Hamner fee ..... Location.
Humble Oil & Refg. Co.'s No. 7 Hamner fee ..... Drlg. sandy lime 1,613 ft.
Humble Oil & Refg. Co.'s No. 2-A Bankers Mortgage .... Location.
Humble Oil & Refg. Co.'s No. 2 Dew Bros. ..... Drlg. sandy shale 3,392 ft.
Humble Oil & Refg. Co.'s No. 9 Sugarland ..... Rig.

HUMBLE—HARRIS COUNTY

Humble Oil & Refg. Co.'s No. 2 Williams, south ..... Drlg. sand and shale 3,473 ft.
Humble Oil & Refg. Co.'s No. 3 Williams ..... Drlg. sand and boulders 1,070 ft.
Humble Oil & Refg. Co.'s No. 1 Glass, south ..... Drlg. shale and lime 3,846 ft.
Marland Oil Co.'s No. 1 Cezeaux, south side ..... Swabbing 100 bbls. daily 4,520 ft.
Harvey Smith et al's No. 1 Rosenthall, north side ..... Drlg. sand and shale 3,874 ft.
South Texas Petroleum Co.'s No. 7 Morris ..... Drlg. hard lime 4,116 ft.
South Texas Petroleum Co.'s No. 8 Morris ..... Drlg. sandy shale 3,883 ft.
South Texas Petroleum Co.'s No. 9 Morris ..... Drlg. sand and boulders 2,272 ft.
South Texas Petroleum Co.'s No. 1 Lee, south flank ..... Location.
Sun Oil Co.'s No. 47 River, north side ..... No report.
The Texas Company's No. 40 Stevenson ..... Drlg. hard sand 4,667 ft.
The Texas Company's No. 263 Landslide, south ..... Standing 4,985 ft.
The Texas Company's No. 265 Landslide, south ..... Drlg. sticky shale 3,795 ft.
The Texas Company's No. 266 Landslide ..... Drlg. gumbo 686 ft.
The Texas Company's No. 29 C.O.&G. ..... Drlg. sand and shale 2,869 ft.
The Texas Company's No. 35 Koehler ..... Drlg. brown shale 3,459 ft.

BLUE RIDGE—FORT BEND COUNTY

J. S. Abercrombie's No. 9 West-Schenck, old well ..... Drlg. 3,998 ft.
Gulf Production Co.'s No. 7 Invincible (old well) ..... Hard sand 4,088 ft.
Gulf Production Co.'s No. 16 Luscher ..... Rig.
Moody Corp.'s No. 8 West-Schenck ..... Drlg. hard sand 4,780 ft.
Navarro Oil Co.'s No. 1-C Robinson, northwest ..... Drlg. shale and lime 4,093 ft.
Sinclair Oil & Gas Co.'s No. 3 Blakely (workover) ..... Drlg. 4,506 ft.
South Texas Petroleum Co.'s No. 1 Lee (workover) ..... Standing.

PIERCE JUNCTION—HARRIS COUNTY

Abercrombie & Harrison's No. 1 Ritter ..... Drlg. 3,485 ft.; total depth 5,558 ft.
Anderson & Plummer's No. 5 Whitehead, old well ..... Drlg. 5,351 ft.
Gulf Production Co.'s No. 29 Taylor (work-over) ..... Drlg. gumbo 4,512 ft.
Gulf Production Co.'s No. 30 Taylor, east ..... Washing 4,635 ft.
Moody Corp.'s No. 2 Calvert, northeast ..... Drlg. gumbo and lime 3,935 ft.
Moody Corp.'s No. 5-B Settegast ..... Tested salt water 4,624 ft.; to deepen.
Navarro Oil Co.-Humble Oil & Refg. Co.'s No. 4 Dooley, east ..... Drlg. sticky shale 4,548 ft.
Navarro Oil Co.-Texas Exploration Co.'s No. 16 Dooley, east side ..... Waiting cement to set 4,591 ft.
Navarro Oil Co.'s No. 4-B Cain ..... Drlg. sticky shale 4,548 ft.
Pure Oil Co.'s No. 1 Herman estate, southwest ..... Set 94 ft. screen 4,992 ft.; flowed 313 bbls. 1.3 per cent b.s. and water; pressure 200 lbs. on ⅝-in. choke; gravity 23 degrees at 80 degrees.
Rio Bravo Oil Co.'s No. 11 B. Settegast ..... Rig.
Rio Bravo Oil Co.'s No. 8-A Settegast (old well) ..... To pump 4,512 ft.
Rio Bravo Oil Co.'s No. 14-A Settegast, west ..... Set 9⅝-inch casing 4,748 ft.
Saxet Gas Co.'s No. 2 Herman estate, southwest ..... Drlg. gumbo 3,965 ft.
Saxet Gas Co.'s No. 3 Herman estate, southwest ..... Fishing 4,313 ft.
J. F. Barron's No. 2 Fitzsimmons ..... Derrick.
Shaw & Texas Exploration Co.'s No. 2-F Fitzsimmons.... Derrick.
T. G. Shaw's No. 1 Dooley ..... Drlg. gummy shale 4,915 ft.

LIBERTY—LIBERTY COUNTY

Associated Oil Co.'s No. 6 Harrison ..... Location.
Liberty Oil & Sulphur Co.'s No. 2 Monroe ..... Location.
Empire Gas & Fuel Co.'s No. 3 Groggan ..... Drlg. 486 ft.
Painter Oil Co.'s No. 2 Turner ..... Drlg. 421 ft.
Navarro Oil Co.'s No. 5 Baldwin Community ..... Rig.
Pierce & Rogers No. 1 Pickett ..... A'andoned 406 ft. in cavity.
Sun Oil Co.'s No. 45 Mitchell ..... Cemented 7-in. casing 3,180 ft. to test oil sand 3,336 ft.
Sun Oil Co.'s No. 46 Mitchell ..... Drlg. gumbo 2,930 ft.
Sun Oil Co.'s No. 47 Mitchell ..... Location.
The Texas Company's No. 3 Pickett ..... Reaming; bottom in shale 5,174 ft.
Vacuum Oil Co.'s No. 11 Barrett ..... Abandoned 2,817 ft.

HULL—LIBERTY COUNTY

Datisetta Oil Co.'s No. 1 Wilson ..... Comp. pumping 3 bbls. oil 2,043 ft.
Empire Gas and Tidal Co.'s No. 27 Barngrover, old well.. Rigging up to deepen 3,140 ft.
Gulf Production Co.'s No. 39 Phoenix, old well ..... Drlg. sticky shale 2,481 ft.
Gulf Production Co.'s No. 49 Phoenix, old well ..... Rigging up to deepen.
Humble Oil & Refg. Co.'s No. 11 Hooks-Spell ..... Rig.
Republic Production Co.'s No. 61 Dolbear, old well .... Comp. pumping 175 bbls. 80 per cent oil.
Sun Oil Co.'s No. 10 Carr ..... Comp. pumping 40 bbls. 457 ft.
Republic Production Co.'s No. 68 Dolbear (old well)..... Drlg. 2,169 ft.
Republic Production Co.'s No. 107 Dolbear (old well).... Comp. pumping 200 bbls. oil 2,930 ft.
Republic Production Co.'s No. 114 Dolbear (old well).... Drlg. 2,012 ft.
The Texas Company's No. 1 Hannah-Vacuum ..... Location.

BIG CREEK—FORT BEND COUNTY

Benedum & Trees' No. 2 Ahlers ..... Drlg. 3,562 ft.
Gulf Production Co.'s No. 30 Davis (old well) ..... Rig up to deepen 3,800 ft.
Gulf Production Co.'s No. 54 Davis ..... Drlg. sandy shale 4,015 ft.
The Texas Company's No. 2 Wheat (old well) ..... Drlg. sand and shale 3,433 ft.
Navarro Oil Co.'s No. 3 Haussler (former gas well) ..... Comp. pumping 20 bbls. oil 2,566 ft.
Navarro Oil Co.'s No. 4 Davis ..... Location.

NASH—BRAZORIA COUNTY

Rycade Oil Corp.'s No. 26 Wisdom ..... Drlg. hard sandy lime 4,527 ft.

BATSON—HARDIN COUNTY

Acorn Oil Co.'s No. 71 Paraffine ..... Rig.
Ada Belle Oil Co.'s No. 128 Paraffine ..... Drlg. 1,146 ft.
Capitol Oil Co.'s No. 11 Hodges ..... Shut down 3,190 ft.
Gulf Production Co.'s No. 18 Knight fee (old well) ..... Tested salt water; abandoned.
Gulf Production Co.'s No. 172 Wing ..... Drlg. gumbo 309 ft.
Paraffine Oil Co.'s No. 46 Paraffine ..... Standing 1,248 ft.
Paraffine Oil Co.'s No. 80 Paraffine ..... Drlg. 1,161 ft.

SOUR LAKE—HARDIN COUNTY

Humble Oil & Refg. Co.'s No. 6 Bashara (old well) .... Rig up to deepen.
Lake View Oil Co.'s No. 61 Hardin ..... Testing oil sand 1,349 ft.

SARATOGA—HARDIN COUNTY

Rio Bravo Oil Co.'s No. 37-C ..... Comp. flowing 8 bbls. pipe line oil 932 ft.
Rio Bravo Oil Co.'s No. 78-C ..... Rig.
E. W. Skinner's No. 15 Kirby ..... Drlg. 1,502 ft.

ORANGE—ORANGE COUNTY

Brownie-Babbett Oil Co.'s No. 2 McLean, old well ..... Rig up to deepen.
Rex Petroleum Co.'s No. 7 Carbello, old well ..... Drlg. 3,072 ft.
Tillery Oil Co.'s No. 2 State (workover) ..... Washing 3,027 ft.

GOOSECREEK—HARRIS COUNTY

Humble Oil & Refg. Co.'s No. 75 Simms-Smith ..... Fishing drill pipe 5,243 ft.
C. T. Rucker's No. 1 Jones ..... Shut down 832 ft.
Lake Shore Oil Co.'s No. 4 Duke ..... Rig.
Lee & Scott's No. 1 Scott ..... Comp. pumping 125 bbls. oil 1,212 ft.
Lube Well Oil Co.'s No. 1 Dannenbaum, old well ..... Rig up to deepen.
Newton & Lillie's No. 3 Schilling, old well ..... Rig up to deepen.

SPINDLETOP—JEFFERSON COUNTY

Gulf Production Co.'s No. 6 Oakwood (old well) ..... Drlg. sand 2,967 ft.
Sun Oil Co.'s No. 11 McLean (workover) ..... Drilling.
Yount Lee Oil Co.'s No. 14 McFaddin (workover) ..... Reset screen 2,602 ft.
Yount Lee Oil Co.'s No. 54 McFaddin (old well) ..... No report.
Yount Lee Oil Co.'s No. 89 McFaddin (old well) ..... Standing.
Yount Lee Oil Co.'s No. 107 McFaddin ..... To set casing 4,456 ft.
Yount Lee Oil Co.'s No. 108 McFaddin ..... Cemented casing 3,603 ft.
Yount Lee Oil Co.'s No. 109 McFaddin ..... Drlg. shale and lime 3,339 ft.
Yount Lee Oil Co.'s No. 110 McFadden ..... Drlg. sand 2,960 ft.
Yount Lee Oil Co.'s No. 36 Gladys City (workover) .... Drlg. shale and lime 3,302 ft.
Yount Lee Oil Co.'s No. 43 Gladys City (workover) .... Drlg. sand 5,710 ft.
Yount Lee Oil Co.'s No. 68 Gladys City (workover) .... No report.
Yount Lee Oil Co.'s No. 94 Gladys City ..... Standing 3,947 ft.
Yount Lee Oil Co.'s No. 95 Gladys City, old well ..... Rig up to deepen.

WEST COLUMBIA—BRAZORIA COUNTY

Humble Oil & Refg. Co.'s No. 3 Smith ..... Drlg. gumbo and lime 1,816 ft.
Marland Oil Co.'s No. 1 Hogg ..... Location.
Saxet O'l Co.'s No. 1 Hogg ..... Rig.
Saxet Oil Co.'s No. 1 Masterson ..... Derrick.
The Texas Company's No. 24 Arnold ..... Drlg. gumbo 1,295 ft.

HIGH ISLAND—GALVESTON COUNTY

Marrs McLean's No. 11 Cade (old well) ..... Testing oil sand 3,774 ft.
Marrs McLean's No. 15 Cade ..... Pulling strainer to deepen 3,741 ft.

DAMON MOUND—BRAZORIA COUNTY

Cullen & West's No. 1 Smith ..... Drlg. sandy shale 4,292 ft.
Sinclair Oil & Gas Co.'s No. 6 Norton ..... Heaving shale 4,286 ft.
Leonard Petroleum Co.'s No. 4 Wisdom ..... Drlg. hard lime 3,232 ft.

MARKHAM—MATAGORDA COUNTY

Rycade Oil Corp.-Humble Oil & Ref. Co.'s No. 6-A Kountze ..... Total depth 4,291 ft. in heaving shale; plugged to 3,797 ft. and tested salt water; abandoned.

ORCHARD—FORT BEND COUNTY

Gulf Prod. Co.'s No. 19 Moore ..... Fishing drill pipe 4,954 ft.

NORTH DAYTON—LIBERTY COUNTY

Fort Bend Oil Co.'s No. 1 Ballarack ..... Shut down 4,650 ft.
Harrison Oil Co.'s No. 4 Quintette ..... Drlg. 2,597 ft.
Sun Oil Co.'s No. 2 Kovelcik ..... No report.

REFUGIO—REFUGIO COUNTY

George Ball's No. 1 Terrell (workover) ..... Drlg. sandy shale 3,550 ft.
Morgan Oil Corp.'s No. 1 City ..... Drlg. hard rock 1,068 ft.
Morgan Oil Corp.'s No. 1 Fox heirs ..... Derrick.
Hewitt et al's No. 1 Cemetery ..... Derrick.
Houston Gulf Gas Co.'s No. 5 Ryals ..... Cemented surface casing 50 ft.
Houston Gulf Gas Co.'s No. 9 Lambert ..... Waiting cement to set 3,577 ft.
Houston Gulf Gas Co.'s No. 6 Shelly ..... Drlg. rock 4,635 ft.
Houston Gulf Gas Co.'s No. 3 Rose Lambert ..... Drlg. rock 2,530 ft.
Houston Gulf Gas Co.'s No. 3 Adkins ..... Tested salt water; abandoned 3,910 ft.
Houston Gulf Gas Co.'s No. 2 Rooke ..... Cleaned hole 4,530 ft.; to deepen.
Houston Gulf Gas Co.'s No. 1 Buckley ..... Fishing drill pipe 3,129 ft.
Houston Gulf Gas Co.'s No. 1 Morgan-Skelly ..... Rig.
Mission Drilling Co.'s No. 1 Shay ..... Drlg. sandy lime 2,830 ft.
Mission Drlg. Co.'s No. 1 O'Brien ..... Waiting cement to set 3,988 ft.
Mission Drlg. Co.'s No. 2 Powers ..... Drlg. lime and gumbo 3,046 ft.
Mission Drlg. Co.'s No. 1 J. F. B. Heard ..... Rebuilding derrick after killing blowout 4,088 ft.
Mission Drlg. Co.'s No. 1 Strauch ..... Derrick.
Benedum & Trees' No. 4 Clint Heard ..... Putting on gas lift 3,695 ft.
Saxet Co.'s No. 5 Clint Heard ..... Sidetracking 3,615 ft.
Saxet Co.'s No. 8 Clint Heard ..... Swabbed 350 bbls. fluid, 40 per cent water on one-fourth-inch choke; sand 3,690-93 ft.
Houston Oil Co.'s No. 1 Rea ..... Derrick.
Houston Oil Co.'s No. 1 F. Rooke ..... Comp. dry gas 1,450 lbs. pressure, 3,685 ft.
Houston Oil Co.'s No. 12 Rooke ..... To make drill stem test 3,793-94 ft.
Houston Oil Co.'s No. 6 Wilson Heard ..... Swabbed salt water 3,692 ft.; to sidetrack.
Oigufer Oil Co.'s No. 2 Ryals ..... Waiting cement to set 3,651 ft.
Blanco Creek Oil Co.'s No. 1 St. Johns ..... Fishing pipe.
W. L. Pearson trustee, No. 1 Fox ..... Dry gas sand 3,693 ft.
Sun Oil Co.'s No. 2 Rea ..... Drlg. gumbo 1,869 ft.
Texas Gas Co.'s No. 1 Rogers ..... Spudded.

SOUTH LOUISIANA FIELDS
LOCKPORT—CALCASIEU PARISH

Shell Petroleum Corp.'s No. 1 Miller ..... Drlg. sand and shale showing oil; 6,680 ft.
Vacuum Oil Co.-Gulf Refg. Co.'s No. 9 Miller ..... Set screen to test oil sand 3,924 ft.
Vacuum & Gulf's No. 15 Miller ..... Tested salt water 4,370 ft.; to sidetrack.
Vacuum & Gulf's No. 3 State ..... To put on air lift 4,400 ft.
Vacuum Oil Co.'s No. 7 Bordages ..... Set surface casing 1,045 ft.
Vacuum Oil Co.'s No. 3-A fee ..... Set 18-in. casing 85 ft.

HACKBERRY—CAMERON PARISH

Calcasieu Oil Co.'s No. 7 Dorion, East Hackberry ..... Location.
Calcasieu Oil Co.'s No. 2 Lemke, East Hackberry ..... Drlg. shale and lime 3,768 ft.
Calcasieu Oil Co.'s No. 15 Watkins, East Hackberry ..... Fishing bit 3,300 ft.
Cameron Oil Co.'s No. 5 Duhon, Old Hackberry ..... Drlg. sand and shale 3,029 ft.
Fraim Oil Co.'s No. 1 Duhon, Old Hackberry ..... Standing 4,384 ft.
Moon Oil Co.'s No. 4 Sanner, Old Hackberry ..... Set 6⅝-in. casing to test 3,110 ft.
Rycade Oil Corp.-Humble Oil & Refg. Co.'s No. 3 Gulf Land, Old Hackberry ..... Filled cavity 2,347 ft.; to resume drilling.
Sunshine Oil Co.'s No. 2 Ellender, Old Hackberry ..... Drlg. sand 2,583 ft.
The Texas Company's No. 5-B Calcasieu Lake, East Hackberry ..... Drlg. sand and gravel 1,140 ft.

JENNINGS—ACADIA PARISH

Fred Getty's No. 3 Jennings-Clemont ..... Location.
Kathleen Oil Co.'s No. 1 Syndicate fee ..... Spudded.
E. L. Meyers' No. 1 Clemont-Zigler (old well) ..... To work over 1,805 ft.
Ratcliff Oil Co.'s No. 2 McCrusei ..... Comp. pumping 25 bbls. oil 1,551 ft.
Yount Lee Oil Co.'s No. 4 Crowley, northeast flank, Section 48-9s-2w ..... Waiting drill stem; cement setting 7,546 ft.
Yount Lee Oil Co.'s No. 5 Crowley, Sec. 48-9s-2w ..... Location.
Yount Lee Oil Co.'s No. 7 Houssiene-Latrielle, Sec. 47-9s-2w ..... Drlg. 3,500 ft.

EDGERLY—CALCASIEU PARISH

C. M. Crotty's No. 15 Lillard ..... Drlg. 899 ft.
Rex Petroleum Co.'s No. 10 Hunter ..... Drlg. 4,176 ft.

VINTON—CALCASIEU PARISH

Marrs McLean's No. 4 Gray (work-over) ..... Tested dry 1,787 ft.; shut down.
Salt Dome Oil Co.'s No. 2 Shaw ..... Cemented casing to test oil sand 2,814 ft.
Vinton Petroleum Co.'s No. 14 Gray (work-over) ..... Shut down 2,659 ft.
Vinton Petroleum Co.'s No. 9 Rescue (9 acres) ..... Drlg. 3,029 ft.
Vinton Petroleum Co.'s No. 2 Matilda Gray (workover)..Comp. flowing 2,500 bbls. fluid 50 per cent b.s. and water, 3,035 ft.

BAYOU BOUILLON—ST. MARTIN PARISH

Rycade Oil Corp.'s No. 7 Bouillon fee ..... Drlg. hard sandy shale and lime 3,975 ft.
Rycade Oil Corp.'s No. 3 State (former well) ..... Drlg. sandy shale 3,583 ft.

SORRENTO—ASCENSION PARISH

Gulf Refining Co.'s No. 15 United, Sec. 22-10S-4e..... Drlg. sand and shale 2,504 ft.

STARKS—CALCASIEU PARISH

Gulf Refining Co.'s No. 15 Lutcher-Moore ..... Standing in heaving shale 6,134 ft.
Gulf Refining Co.'s No. 13 Industrial ..... Drlg. shale 7,023 ft.

SULPHUR—CALCASIEU PARISH

Union Sulphur Co.'s No. 736 fee ..... Fishing drill pipe 6,064 ft.
Union Sulphur Co.'s No. 746 fee, Sec. 29-9s-10w ..... No report.
Union Sulphur Co.'s No. 747 fee, Sec. 29-9s-10w ..... Comp. flowing 1,000 bbls. 2,797 ft.
Union Sulphur Co.'s No. 748 fee, Sec. 29-9s-10w ..... No report.
Union Sulphur Co.'s No. 749 fee, Sec. 29-9s-10w ..... No report.

SWEET LAKE—CAMERON PARISH

Pure Oil Co.'s No. 7 Yount Lee ..... Drlg. sand 5,877 ft.
Pure Oil Co.'s No. 8 Yount Lee ..... Pulling screen to deepen.

ANSE LA BUTTE—ST. MARTIN PARISH

Yount Lee Oil Co.'s No. 5 Louisiana Pet. Co. ..... Waiting cement to set 3,624 ft.; oil sand.

MISCELLANEOUS WILDCATS

TEXAS

AUSTIN COUNTY

Whittington et al's No. 1 Lass, 4 miles northwest of Bellville ..... No report.

BRAZORIA COUNTY

Thomas Faust et al's No. 4 fee ..... Drlg. gumbo 1,508 ft.
Empire Gas & Fuel Co.'s No. 3 Brock, Stratton Ridge... Drlg. shale 4,876 ft.

CHAMBERS COUNTY

Chicago Oil Corp.'s No. 1 Lawrence ..... No report.
Layne et al's No. 1 Fitzgerald ..... No report.
Pure Oil Co.'s No. 2 Mayes, Lost Lake ..... Cemented casing 2,782 ft.
Pure Oil Co.'s No. 3 Mayes, Lost Lake ..... Tested salt water 2,152 ft.; to deepen.

FORT BEND COUNTY

Gulf Production Co.'s No. 12 Trone, Long Point ..... Set 9⅝-in. casing 2,876 ft.
Gulf Production Co.'s No. 16 Wolf, Long Point ..... Drlg. gypsum 663 ft.
Grayburg Oil Co.'s No. 1 Ranson ..... Drlg. lime rock 1,810 ft.
Humble Oil & Refg. Co.'s No. 1 Miller, Rosenberg ..... Drlg. hard sand 4,881 ft.

HARRIS COUNTY

Baldwin and associates' No. 1 Kitzman, Cypress ..... Set 84 ft. 3-in. screen 4,055 ft.; tested fresh water.
A. F. Belunek's No. 1 Thompson ..... Started drilling.
Humble Oil & Refg. Co.'s No. 6 Warren Hockley ..... Rig.
Humble Oil & Refg. Co.'s No. 2 Irvin ..... Drlg. shale 3,893 ft.
Humble Oil & Refg. Co.'s No. 1 Woodburn, Genoa ..... Drlg. shale and lime 4,158 ft.
Little York Oil Co.'s No. 1 Davis, Little York ..... Abandoned 4,018 ft.
York & Robertson's No. 1 Garrett, Harris & Carpenter Survey ..... No report.

JEFFERSON COUNTY

Bleakie Oil Co.'s No. 1 Tolliver, Dyches Survey ..... Shut down 2,800 ft.
Deep Test Oil Corp.'s No. 1 Faith-McFadden ..... Shut down 3,706 ft.
Gulf Production Co.'s No. 3 Burrell Fannette ..... Drlg. gumbo 1,380 ft.
Gulf Production Co.'s No. 7 Bordages, Fannette (workover) ..... Tested salt water 5,955 ft.; pulling liner.
Gulf Production Co.'s No. 11 Thomas, Fannette (workover) ..... Reaming, bottom in sand 5,893 ft.
Nederland Oil & Dev. Co.'s No. 1 Young, Nederland .... Shut down 2,520 ft.
River Oil Corp.'s No. 1 Ship Channel, Brown Survey .... Shut down; gumbo 1,721 ft.
Shell Petroleum Corp.'s No. 1 Heisig, Hampshire ..... Dlg. sticky and sandy shale and lime 6,117 ft.
The Texas Company's No. 2 Pipkin, Big Hill ..... Drlg. 202 ft.
Vacuum Oil Co.'s No. 1 Herbert-Broussard, T.&N.O. Survey No. 208 ..... Drlg. gumbo 1,055 ft.
Westbury Oil Co.'s No. 1 West ..... No report.

LIBERTY COUNTY

Gulf Production Co.'s No. 2 Boyt Hankamer ..... Core sand 2,897 ft.
Humble Oil & Refg. Co.'s No. 5 Sterling, Moss Bluff..... Drlg. shale and lime 4,362 ft.
Harvey Smith and associates' No. 1 Moore's Bluff, Brunson Sur. ..... Drlg. 1,900 ft.
Pure Oil Co.'s No. 1 Liberty, Moss Bluff ..... Drlg. gumbo and lime 2,771 ft.
Republic Production Co.'s No. 1 Mysilvec, Moore Survey... No report.
Union Exploration Co.'s No. 3 Esperson, Sheeks ..... Location.

MATAGORDA COUNTY

Crossland and associates' No. 1 Hawkins, Shepherds Mott. Set 100 ft. 4½-in. screen 4,850 ft.; tested salt water; waiting orders.

MONTGOMERY COUNTY

Cullen and associates' No. 1 Chase, near Hufsmith ..... Drlg. sticky shale 3,450 ft.
Kelley-Baker et al's No. 1 Juerges ..... Drlg. 200 ft.

ORANGE COUNTY

The Texas Company's No. 1 Polk, Port Neches ..... Derrick.
The Texas Company's No. 1 Starks, Port Neches ..... Rig.
Veteran Oil Co.'s No. 1 Reed, A. Nelson Survey ..... Shut down 4,500 ft.

WALLER COUNTY

Kirby Petroleum Co.'s No. 1 Vaughn, San Felipe ..... Set screen to test oil sand 2,955 ft.

WHARTON COUNTY

Harte et al's No. 1 Brown ..... No report.

SOUTH LOUISIANA

ASCENSION PARISH

Pickard & Geisman's No. 1 Desire Breaux, Darrow ..... Shut down 3,778 ft.
Big Dome Drlg. & Dev. Co.'s No. 1 Reardom, Darrow.... Total depth 4,747 ft.; standing with casing collapsed.
Triumph Oil Corp.'s No. 2 Lacey, Sec. 29-10s-4e ..... No report.

CALCASIEU PARISH

Wilfred LaHay's No. 2 James, Section 14-10s-13w ..... Shut down 3,365 ft.
J. O. Davis' No. 1 Mims, Section 20-9s-7w ..... Standing 5,600 ft.

CAMERON PARISH

Shell Petroleum Corp.'s No. 11 Watkins, Black Bayou .... Swabbed salt water with slight show 834 ft.; to deepen; total depth 984 ft.
Shell Pet. Corp.'s No. 12 Watkins, Black Bayou ..... Rig.
Shell Pet. Corp.'s No. 13 Watkins, Black Bayou ..... Location.
Shell Pet. Corp.'s No. 1 Marceaux, Mallard Bay, Section 32-12s-3w ..... Building derrick.
The Texas Company's No. 4-A Calcasieu Lake, Calcasieu Lake Dome ..... Location.

EVANGELINE PARISH

The Texas Company's No. 1 Guillory, Pine Prairie ..... No report.

IBERIA PARISH

Jefferson Lake Oil Co.'s No. 2 Lake Peigneur, Jefferson Island ..... Rig.
The Texas Company's No. 4-A Vermillion Bay ..... Location.

IBERVILLE PARISH

Gulf Refg. Co.'s No. 10-Z State, Loreauville ..... Drlg. gumbo 410 ft.
Shell Petroleum Corp.'s No. 3 Wilbert, White Castle..... Tested salt water 5,626 ft.; pulling liner.
Standard Oil Co.'s No. 3 Wilbert, Bayou Blue ..... No report.
Standard Oil Co.'s No. 2 Schwing, Bayou Blue ..... No report.
Standard Oil Co.'s No. 3 Schwing, Bayou Blue ..... Location.
Standard Oil Co.'s No. 4 Schwing, Bayou Blue ..... Location.
Standard Oil Co.'s No. 5 Schwing, Bayou Blue ..... Derrick.

JEFFERSON DAVIS PARISH

Vacuum Oil Co.'s No. 2 DeVilbiss, Roanoke ..... Spudded.

PLAQUEMINE PARISH

The Texas Company's No. 2 Garden Island Bay, Sec. 107-23s-32e ..... Spudded.
Humble Oil & Refg. Co.'s No. 1 State, Sec. 2-20s-26e..... Rig.
Humble Oil & Refg. Co.'s No. 1 Lake Washington, Township 20s-26e ..... Location.

ST. BERNARD PARISH

St. Bernard Oil & Gas Co.'s No. 1 fee, Sec. 15-14s-15e.... Shut down 726 ft.

ST. JAMES PARISH

Convent Oil Co.'s No. 2 Reynaud, Sec. 1-12s-4e ..... Location.

ST. LANDRY PARISH

The Texas Company's No. 2 Botney Bay, Point Barre.... To deepen.

ST. MARTIN PARISH

Ohio Oil Co.'s No. 3 Martin, Hager Dome ..... Standing 4,490 ft.
The Texas Company's No. 1 fee, Hager Dome ..... Resumed drilling 1,657 ft.
The Texas Company's No. 2 St. Martin, Hager ..... Rig standing; high water.

ST. TAMMANY PARISH

St. Tammany Oil Co.'s No. 2 Fritchie, Sec. 35-8s-14e .... No report.

TANGIPAHOA PARISH

Completion Oil Co.'s No. 1 Amos ..... No report.
Joan Development Co.'s No. 1 Hilton, Sec. 20-9s-9e ..... No report.

TERREBONNE PARISH

Southern Gas Co.'s No. 1 Waterproof, Houma ..... Standing 2,101 ft.
The Texas Company's No. 1 L. L. & E., Four Isle Bayou.. Abandoned in salt 1,370 ft.
The Texas Company's No. 1-A Timballier Bay, Section 19-22s-20e ..... Drlg. anhydrite 2,964 ft.
The Texas Company's No. 2-A Dog Lake Bayou, 400 ft. south of No. 1 ..... Derrick.
The Texas Company's No. 1-B Dog Lake, Sec. 6-22s-16e... Location.
The Texas Company's No. 1-B Lake Pelto, Section 8-23s-18e ..... Resetting 140 ft. screen 1,388 ft.
The Texas Company's No. 1 Taylor, East Bay Junop Dome ..... Rig.
The Texas Company's No. 2-A Lake Barre, Section 30-21s-20e ..... Rig.
The Texas Company's No. 2-B Bay Coon Road, Sec. 17-22s-18e ..... Building derrick foundations.
The Texas Company's No. 3-B Bay Coon Road, Sec. 17-22s-18e ..... Location.

LOUISIANA-ARKANSAS PROVEN AREAS

(Continued from Page 56)

NORTH LOUISIANA

BOSSIER PARISH—CARTERSVILLE

Company, farm and location— Remarks:
Delaware-Louisiana Development Co.'s No. 4 Bollinger, Sec. 33-23-11 ..... Swbd. li tle mud and oil 5,150 ft; W.O.S.R.; T.D. 3,922 ft.

BOSSIER—BELLEVUE

H. L. Morgan et als' No. 1 Wetherbee, 200 ft. S. 200 ft. W, NE cor. SW SE, Sec. 21-19-11 ..... Derrick pattern.

BOSSIER—ELM GROVE

J. F. Palmer's No. 4 McCann, Sec. 31-16-11 ..... S.D. 1,910 ft.
Palmer Corp.'s No. 2 McDade, 660 ft. N, 660 ft. E, SW cor. NW SW, Sec. 13-17-12 ..... Tested 500,000 ft. gas; 876 ft; drlg. 1,480 ft.
Palmer Corp.'s No. 1 Roos, 660 ft. N, 660 ft. W, SE cor. NW, Sec. 23-17-12 ..... Location.

CADDO PARISH—MOORINGSPORT

Falcon Oil Co.'s No. 1 Nunley, 2,312 ft. N and 5,591 ft. E SW cor. Sec. 29-20-15 ..... Drlg. sand rock 1,740 ft.

CADDO PARISH—DIXIE

Gold and Sklar's No. 2 Hunter, 330 ft. S and W, NE cor. SW NE, Sec. 17-19-14 ..... Drlg. 2,000 ft.
Gold & Sklar's No. 3 Hunter, 330 ft. N, 300 ft. E, SW cor. SW NE, Sec. 17-19-14 ..... Derrick.
Gold & Sklar's No. 4 Hunter, 330 ft. N, 300 ft. W, SE cor. SW NE, Sec. 17-19-14 ..... Location.
Gulf Ref. Co.'s No. 5 Oden, 990 ft. S, 990 ft. E, NW cor. NE, Sec. 18-19-14 ..... Spudded July 17; cmtd. 10-in. 100 ft; drlg. chalk 1,515 ft.
Gulf Ref. Co.'s No. 1 Hunter, 990 ft. N, 990 ft. W, SE cor. NE, Sec. 17-19-14 ..... Drlg. shale 2,385 ft.
Gulf Ref. Co.'s No. 2 Hunter, 330 ft. W, 250 ft S, C, Sec. 17-19-14 ..... Spudded July 19; cmtd. 10-in. 86 ft; drlg. 385 ft.
Ohio Oil Co.'s No. 5 Hunter, 990 ft. E, 330 ft. N, SW cor., Sec. 17-19-14 ..... Location.
Ohio Oil Co.'s No. 2 Hunter, SW cor. NE NW Sec. 17-19-14 ..... W.O.S.R; 200 ft. oil in hole; T.D. 2,415 ft.
Ohio Oil Co.'s No. 3 Hunter, 330 ft. N and E, SW cor. NW NE, Sec. 17-19-14 ..... Cmtd. 6-in. 2,378 ft.
Ohio Oil Co.'s No. 4 Hunter, 330 ft. N and W, SE cor. NW NE, Sec. 17-19-14 ..... Derrick.
Ohio Oil Co.'s No. 5 Hunter, SE cor. NE NW, Sec. 17-19-14 Location.
Palmer Corp.'s No. 2 Hunter, 990 ft. E, 330 ft. N, SW cor. Sec. 8-19-14 ..... Cmtd. 6-in. 2,380 ft.
Standard Oil Co.'s No. 3 Henderson, 220 ft. N, 330 ft. W, SE cor. SW SE, Sec. 7-19-14 ..... Derrick.
Standard Oil Co.'s No. 3 Hunter, 330 ft. S, 330 ft. E NW cor. SE NW, Sec. 17-19-14 ..... Cmtd. 6-in. 2,360 ft; 4½-in. liner 2,412 ft.
Standard Oil Co.'s No. 6 Hunter, 330 ft. S, 330 ft. W, NE cor. NW NW, Sec. 17-19-14 ..... W.O.S.R; T.D. 2,418 ft.
Standard Oil Co.'s No. 7 Hunter, 330 ft. S, 330 ft. W, NE cor. SE NW, Sec. 17-19-14 ..... Drlg. gumbo 2,200 ft.
Standard Oil Co.'s No. 3 Oden, 330 ft. S, 330 ft. W, NE cor. SW NE ..... Location.

CADDO—OIL CITY

W. D. Chew's No. 5 fee, Sec. 33-21-16 ..... Cmtng. bottom; T.D. 2,306 ft.
W. D. Chew's No. 1-C Levee Board, 2,490 ft. W, 1,470 ft. S, NE cor., Sec. 34-21-16 ..... Drlg. 1,600 ft.
Gulf Ref. Co.'s No. 17-A Levee Board, 1,126 ft. S, 150 ft. E, NW cor. NE, Sec. 34-21-16 ..... W.O.S.R; T.D. 1,824 ft.
Gulf Ref. Co.'s No. 18-A Levee Board, 100 ft. S, 180 ft. E, NW cor. NE, Sec. 34-21-16 ..... Location.
Magnolia Petroleum Co.'s No. 18 Doan-Thigpen, SE cor. SW SE Sec. 6-20-15 ..... Drlg. sandy lime 3,617 ft.
Magnolia Pet. Co.'s No. 4 Levee Board, 330 ft. S, 330 ft. E, NW cor. NE NE, Section 7-20-15 ..... Rig up.
C. B. Moore's No. 5 Dillon, SW cor., Sec. 22-20-15 ... Plugged back to 2,188 ft; T.D. 2,202 ft.
Shreveport Oil Corp.'s No. 1 Cheshire, NE Sec. 32-21-15 ..... Plugged back to 1,640 ft; standing 900 ft. in oil; waiting on standard rig; T.D. 2,156 ft.
Shreveport Oil Corp.'s No. 1 Guy, NW NE Sec. 32-21-15 ..... Tested S.W. with show of oil; S.D. for orders; T.D. 2,300 ft.
Simplex Oil Co.'s No. 7 Youree-Randolph, 660 ft. N and 660 ft. W C Sec. 13-20-15 ..... Tested 50,000 ft. gas at 2,300 ft; S.D. for orders; T.D. 2,326 ft.
The Texas Co.'s No. 69 Levee Board, 230 ft. N, 200 ft. E, SW cor. SE, Sec. 27-21-16 ..... Spudded July 18; cmtd. 10-in. 82 ft; drlg. 750 ft.
L. A. Warren's No. 1 Ivins, 200 ft. S, 200 ft. W, C, Sec. 33-22-15 ..... Derrick.

CADDO PARISH—LEWIS

Snake Creek Oil Co.'s No. 1 Levee Board, SW NW Sec. 9-21-16 ..... Tested dry with show of oil and S.W; S.D.; T.D. 2,328 ft.

CADDO PARISH—PINE ISLAND

Dixie Oil Co.'s No. 92 Dillon, SW NW Sec. 13-21-15 .... Cored sandy lime 6,304 ft.

Dixie Oil Co.'s No. 100 Dillon, 1,800 ft. S, 415 ft. E, NW cor., Sec. 13-21-10 ..... W.O.S.R. 1,724 ft.
Dixie Oil Co.'s No. 5 Hobbs, SE cor. NW SE Sec. 21-21-15 ..... S.D. 1,673 ft.
Magnolia Petroleum Co.'s No. 18 Dillon, NW cor. Sec. 24-21-15 ..... T.A. 4,866 ft.

CLAIBORNE PARISH—HOMER

Oakes and others' No. 1 Richardson, NE SE Sec. 19-21-7 ..... S.D. 1,112 ft; in litigation.

CLAIBORNE PARISH—HAYNESVILLE

Smitherman & McDonald and others' No. 1 Miller, 825 ft. S and 660 ft. E C Sec. 17-23-8 ..... S.D. for orders; T.D. 4,780 ft.

LASALLE PARISH—URANIA

Kinney, Hardtner & Randall's No. 1 Kinney, SW SW Sec. 7-10-2e ..... Drlg. 1,300 ft.
Gardner et als' No. 1 Missouri-Pacific R.R., Sec. 26-10-1e ..... Derrick.
Philp and others' No. 1 Urania, SE cor. NE NE Sec. 1-10-1e ..... S.D. waiting orders; T.D. 630 ft.
Randall and others' No. 3 Urania, Sec. 1-10-1e ..... S.D. 675 ft.
G. W. Zoder's No. 3 King, 150 ft. N, 600 ft. W, SE cor. NE, Sec. 13-10-1e ..... Location.

LASALLE PARISH—LITTLE RIVER

Montague Oil Co.'s No. 7 Zenoria Lumber Co., Sec. 11-9-1e ..... Set 8-in. at 825 ft; tested S.W.; waiting orders.

MOREHOUSE PARISH

Consolidated Carbon Co.'s No. 2 J. White, 429 ft. W, 149 ft. N, SE cor., Sec. 16-20-4 ..... Blew out; estimated 20,000,000 ft. gas; burning; T.D. 235 ft.
Grecian Bend Gas Co.'s No. 1 Seacrease, 2,025 ft. S, 203 ft. W, NE cor. SE, Sec. 14-20-4 ..... Location.
J. S. Herkness' No. 8 Bowles, 660 ft S, 660 ft. E, NW cor. NE, Sec. 18-20-5 ..... Location.
S. D. Hunter's No. 9 Allison, 660 ft. S, 660 ft. E, NW cor. Sec. 18-20-5 ..... Spudded July 12; cmtd. 12-in. 196 ft; 8-in. 832 ft.
S. D. Hunter's No. 10 Allison, 1,962 ft. E, 660 ft. S, NW cor., Sec. 18-20-5 ..... Location.
Magnolia Pet. Co.'s No. 5 U. S., 620 ft. N, 330 ft. W, SE cor. NE SW, Section 29-21-5 ..... Rig up.
Natural Gas Producing Co.'s No. 15 Tensas, SW NW Sec. 4-22-4 ..... Cmtd. 6-in. 2,053 ft.
Southern Carbon Co.'s No. 11 Tensas, SE SE Sec. 31-21-4 ..... Drlg. 1,165 ft.
United Carbon Co.'s No. 2 Patton, 660 ft. N, 660 ft. E, SW cor. SE, Sec. 2-20-4 ..... Location.
United Carbon Co.'s No. 3 Patton, 660 ft. W, 660 ft. S, NE cor. SE, Sec. 2-20-4 ..... Location.

OUACHITA PARISH

Arkansas-Louisiana Pipe Line Co.'s (Ark. Nat. Gas Co.) No. 1 Kate Cole, 570 ft. S, 570 ft. E, NW cor. SW, Sec. 10-18-4 ..... Tested dry 2,175 ft; arranging to deepen.
Austin & Jordan's No. 1 H. M. McGuire, SW SW Sec. 11-18-3 ..... Drlg. gumbo 860 ft.
Bahan & Bahan's No. 1 Frierson, 300 ft. S, 300 ft. E, NW cor. NE, Sec. 18-19-4 ..... Spudded July 17; cmtd. 12-in. 180 ft; 8-in. 858 ft.
J. B. Bond's No. 1 McEnery, 138 ft. N, 792 ft. E, SW cor. SE, Sec. 19-19-4 ..... Cmtd. 6-in. 2,141 ft.
B. J. Dickinson's No. 1 Stubbs, 379 ft. S, 76 ft. W, NE cor. NW, Sec. 27-19-4 ..... Location.
J. S. Herkness' No. 7 Bowles, 1,806 ft. E, 3,165 ft. S, NW cor. NE, Sec. 20-20-5 ..... Drlg. shale 1,800 ft.
Imperial O. & G. Co.'s No. 8 Stubbs, 1,792 ft. S, 550 ft. W, NE cor. NW, Sec. 18-19-4 ..... Location.
G. E. Jordan's No. 1 Anding, NW NE Sec. 13-18-5 ..... Plugged back to 2,234 ft; T.D. 2,480 ft.
Jordan Drlg. Co.'s No. 4 J. Cole, 2,337 ft. N, 3,201 ft. W, SE cor., Sec. 1-18-3 ..... Spudded July 17; cmtd. 12½-in. 209 ft.
La Del Prod. Co.'s No. 49 fee, 1,320 ft. N, 924 ft. W, SE cor. SW, Sec. 30-20-5 ..... Location.
Mack & Pipes' No. 1 Slagle & Johnson, 1,294 ft. N, 309 ft. W, NW cor., Sec. 47, in Sec. 48-18-4 ..... Location.
Mack & Pipes' No. 1 S. Wallace, 2,010 ft. S. 369 ft. E, NW cor., Sec. ..... Spudded July 18; cmtd. 10-in. 195 ft; drlg. 1,500 ft.
Magnolia Pet. Co.'s No. 2 fee 404, 660 ft. N, 660 ft. W, SE cor., Sec. 15-19-5 ..... Spudded July 20; cmtd. 15⅛-in. 175 ft.
Magnolia Pet. Co.'s No. 3 fee 404, 660 ft. N, 660 ft. E, SW cor., Sec. 11-19-5 ..... Location.
Magnolia Petroleum Co.'s No. 4 U. S., SE NW Sec. 20-19-5 ..... Tested dry 2,220 ft; arranging to retest 2,260 ft.
J. Potts, trustee's No. 3 Potts, 425 ft. N, 345 ft. E, NW cor., Sec. 47, in Sec. 7-18-4 ..... Location.
Southern Carbon Co.'s No. 54 fee, 660 ft. N, 674 ft. W, SE cor. NE, Sec. 13-19-4 ..... Location.
United Oil & Natural Gas Products Co. of Louisiana's No. 2 Cole, 660 ft. S, 594 ft. E, C, Sec. 26-20-4 ..... Derrick.
United Oil & Natural Gas Products Co. of Louisiana's No. 5 Guthrie, 6,896 ft. N, 6,022 ft. W, cor. Secs. 49, 26, and 25, Sec. 49-20-5 ..... Derrick.
West Virginia O. & G. Co.'s No. 8 W. Va., NW NW, Sec. 8-18-4 ..... Cmtd. 6-in. 2,148 ft.
H. L. Wood's No. 1 Miller, Sec. 18-18-5 ..... Spudded July 16; cmtd. 12-in. 184 ft; drlg. 1,600 ft.

RED RIVER PARISH

J. H. Askew's No. 1 Lockett, NW SW Sec. 32-13-10 ..... Rigging up with cable tools to drill in; T.D. 1,630 ft.
Root Refineries, Inc.'s No. 1 Home State & Savings Bank, 330 ft. N, 330 ft. W, C, Sec. 8-13-10 ..... Drlg. 1,592 ft.

RICHLAND PARISH

W. C. Feazel's No. 1 Haynes & Moore, 275 ft. S, 1,429 ft. E, NW cor. NE, Sec. 17-16-6 ..... Derrick.
W. C. Feazel's No. 2 McCoy, 330 ft. E, 660 ft. N, SW cor., Sec. 33-16-6 ..... Location.
Feazel, Bendel & Brown's No. 1 J. H. Hunter, 660 ft. S, 660 ft. W, NE cor. NW, Sec. 23-16-6 ..... Location.
Hope Producing Co.'s No. 1 Eubanks, NW SE Sec. 26-17-6 ..... Tested dry 2,450 ft; drlg. rock 2,478 ft.
S. R. Humble's No. 1 Binion & Sartor, 660 ft. S, 660 ft. E, NW cor. SW, Sec. 22-17-6 ..... Drlg. 1,384 ft.
International Gas Products Co.'s No. 1 Beck, 660 ft. N, 660 ft. E, SW cor., Sec. 25-16-6 ..... Cmtd. 6-in. 2,282 ft.
Magnolia Pet. Co.'s No. 2 Hatch, 180 ft. N, 660 ft. W, SE cor, NE SE, Sec. 2-15-5 ..... Location.
Magnolia Pet. Co.'s No. 3 C. M. Noble, 370 ft. S, 105 ft. W, NE cor. SE NE, Sec. 35-16-5 ..... Cmtd. 8⅛-in. 2,303 ft.
Magnolia Pet. Co.'s No. 4 C. M. Noble, 400 ft. S, 660 ft. W, NE cor. SE NE, Sec. 35-16-5 ..... Location.
M. L. Meredith's No. 1 Holdness, 1,980 ft. S, 990 ft. W, NE cor., Sec. 15-16-6 ..... Derrick.
Northern Louisiana Natural Gas Co.'s No. 2 Boykin, 1,034 ft. E, 911 ft. N, SW cor. SE, Sec. 20-17-6 ..... Spudded July 22; cmtd. 15⅛-in. 178 ft.
Northern La. Nat. Gas Co.'s No. 4 Boykin, Sec. 20-17-14 ..... Rig up; relief well to cratered Nos. 1 and 3 Boykin.
Palmer Corp.'s No. 1 Eubanks, 1,100 ft. N, 350 ft. E, SW cor. SE NW, Sec. 26-17-6 ..... Location.
Palmer Corp.'s No. 1-A Jones, 660 ft. S, 660 ft. E, NW cor. NE SW, Sec. 22-17-6 ..... Cmtd. 6⅝-in. 2,306 ft.
Palmer Corp.'s No. 1 La. Pet. Co., Sec. 22-17-6 ..... Old well drilling deeper; completed Sept. 8, 1927, as La. Pet. Co.'s No. 1 Binion & Sartor, 5,000,000 ft. gas; T.D. 2,476 ft; arranging to deepen.
Southern Carbon Co.'s No. 1 Binion & Sartor, 660 ft. N, 1,320 ft. E, SW cor. SE, Sec. 21-17-6 ..... Drlg. shale 2,202 ft.

SABINE PARISH—PLEASANT HILL

Bridges-Clark Oil Co.'s No. 1 Williams, 1,520 ft. E, 1,-780 ft. N, SW cor., Sec. 33-12-10 ..... Drlg. 1,875 ft.

UNION PARISH

Bahan & Bahan's No. 1 Peake, 1,007 ft. S, 126 ft. W, NE cor., Sec. 17-20-4 ..... Cmtd. 6-in. 2,090 ft.
Bahan & Bahan's No. 2 Peake, 1,425 ft. S, 100 ft. W. NE cor., Sec. 17-20-4 ..... Location.
Bahan & Bahan's No. 1 School fee, formerly No. 1 Barr, NW NW Sec. 10-20-3 ..... Spudded July 20; cmtd. 12-in. at 185 ft.
Harrell & Jones' No. 1 Stripling, NE NE Sec. 17-20-4 ..... S.D. 2,150 ft.
Natural Gas Producing Co.'s No. 3 Hale, 1,850 ft. S, 660 ft. W, NE cor., Sec. 11-21-2 ..... Drlg. shale 1,926 ft.

WEBSTER PARISH—COTTON VALLEY

Magnolia Petroleum Co.'s No. 1 McCook & Hibbler, C SW SW Sec. 22-21-10 ..... Fishing for roller bit cones; T.D. 6,542 ft.
Magnolia Petroleum Co.'s No. 5-A Robbins, SE SW Sec. 21-21-10 ..... Drlg. lime and shale 3,895 ft.
Ohio Oil Co.'s No. 43 Bodcaw, C NW SW Sec. 24-21-10 ..... Drlg. anhydrite, shale and lime, 4,490 ft.
Ohio Oil Co.'s No. 44 Bodcaw, NW NW Sec. 28-21-10 ..... Drlg. lime and shale 4,045 ft.
Standard Oil Co.'s No. 22-B Bodcaw, Sec. 28-21-10 ..... Drlg. hard shale 4,277 ft.

WEBSTER PARISH—SAREPTA AND SHONGALOO

J. W. Clark, trustee's, No. 1 W. B. Roseberry, W half SE SW Sec. 32-23-9 ..... Standing 1,400 ft. fluid; little S. W.; 5 ft. sand; W.O.S.R.; T.D. 2,767 ft.
Pat Hudson's No. 1 Slack, SE NE Sec. 1-22-9 ..... Tested dry 2,730 ft; drlg. 2,745 ft.
W. M. Kemp et als' No. 1 R. D. Campbell, 250 ft. S, 250 ft. W, NE cor. NW NE, Sec. 11-22-10 ..... Tested S.W. 2,650 ft; arranging to deepen.
Magnolia Petroleum Co.'s No. 1 Adkins, NE NW Sec. 4-22-9 ..... Waiting on standard rig with 1,000 ft. fluid in hole; T.D. 2,665 ft.
Magnolia Petroleum Co.'s No. 1 Sally Coyle, SE NE Sec. 2-22-11 ..... Standing 1,500 ft. in fluid; fishing for bailer; T.D. 2,695 ft.
Magnolia Pet. Co.'s No. 1 Roseberry, 330 ft. N, 330 ft. W, SE cor. NW SE, Sec. 19-23-9 ..... Fishing for drill stem; T.D. 2,504 ft; in chalk.
Magnolia Pet. Co.'s No. 2 Roseberry, 330 ft. N, 330 ft. W, SE cor. NW SE, Sec. 19-23-9 ..... Location.
Woodmansee et als' No. 1 Boyd, 200 ft. S, 200 ft. E, NW cor. SE SW, Sec. 3-22-11 ..... Derrick.

WINN PARISH—URANIA

Gardner, Hunter & Brown's No. 14 Harper, 500 ft. N, 500 ft. E, SW cor. SE SW, Sec. 23-10-1e ..... Derrick.
Gardner, Harter & Brown's No. 13 Harper, 1,000 ft. N, 250 ft. E, SW cor. SE SW, Sec. 23-10-1e ..... Spudded July 10; cmtd. 10-in. 101 ft; 6-in. 1,498 ft.

ARKANSAS

NEVADA COUNTY

C. F. Steele's No. 1 E. W. Groves, Sec. 21-14-20 ..... Did not abd. as dry hole at 2,150 ft; drilled to 2,513 ft; waiting orders.
Wright Oil Co.'s No. 4 Groves, Sec. 12-14-21 ..... Waiting on standard rig; T.D. 1,140 ft.

OUACHITA COUNTY—SMACKOVER

L. H. Hamilton's No. 1 Arnold & Doyle, SE SE Sec. 23-15-16 ..... Arranging to cmt. 6⅝-in., 1,987 ft; T.D. 2,006 ft.
Magna Producing Co.'s No. 10-B Linahan, NE cor. SE NW, Sec. 36-15-16 ..... Cmtd. 10-in. 84 ft; 6-in. 1,987 ft; formerly listed as No. 5-B.
Magna Producing Co.'s No. 11-B Linahan, 25 ft. NE of No. 10-B, in SW cor. SE NW, Sec. 36-15-16 ..... Rig up.
Marine Oil Co.'s No. 1-A Snyder, 105 ft. S, 105 ft. E. NW cor. NW SW, Sec. 34-15-15 ..... Drlg. 1,200 ft.
McDonald Bros.' No. 2-A Wilson, 330 ft. S, 330 ft. E, NW cor. NE SW, Sec. 25-15-18 ..... Spudded July 16; cmtd. 12-in. 102 ft; drlg. 1,375 ft.
McDonald Bros.' No. 4-B Wilson, 150 ft. N, 150 ft. E, SW cor. SW NW, Sec. 25-15-18 ..... Derrick.
Phillips Pet. Co.'s No. 1 Scott, SE cor. SW NE, Sec. 34-15-15 ..... Spudded July 15; cmtd. 10-in. 64 ft; drlg. 1,760 ft.
Skelly Oil Co.'s No. 1 Wood, 300 ft. N, 300 ft. E, SW cor. SE NE, Sec. 34-15-15 ..... Coring 1,922 ft.
Standard Oil Co.'s No. 1 Geo. Powell, 160 ft. N, 160 ft. W, C, Sec. 34-15-15 ..... Cmtd. 6-in. 1,939 ft.

UNION COUNTY—CHAMPAGNOLLE

O. W. Estes' No. 1 Hargett, 200 ft. N, 200 ft. E, SW cor. SW Sec. 13-17-14 ..... Location.
Gann and others' No. 1 Doss, Sec. 10-17-15 ..... Drill stem test at 3,205-20 ft; 10 ft. sand, dry; coring 3,230 ft.
Gann and others' No. 1 Schmidt, NW NW Sec. 15-17-14 ..... Derrick.
Magnolia Pet. Co.'s No. 1 Gregory, NE cor. SW SW, Sec. 15-17-14 ..... Coring 2,600 ft.
Oilwell Corp.'s No. 2-E Perdue, NW NW, Sec. 9-17-15 ..... S.D. 3,265 ft.
Pure Oil Co.'s No. 10 E. F. Gregory, 359 ft. W, 123 ft. S, NE cor. SE SE, Sec. 10-17-14 ..... Derrick.
Rovenger Oil Corp.'s No. 3-B Perdue, 330 ft. S, 330 ft. W, NE cor. SE NE, Sec. 9-17-15 ..... Bailed dry; T.D. 2,763 ft.

UNION COUNTY—EL DORADO

J. P. Hawkins' No. 1 Goodwin, Sec. 8-17-15 ..... Tested 5,000,000 ft. gas, 8 ft. sand; cmtd. 6⅝-in; T.D. 2,193 ft.
Rice et als' No. 1 W. Raltey, 150 ft. S, 150 ft. E, NW cor. SW, Sec. 7-17-15 ..... Spudded July 18; cmtd. 10-in. at 92 ft.
Weisinger and others' No. 7 Goodwin, Sec. 31-17-15 ..... Sidetracking 1 joint 5 3-16-in; T.D. 2,150 ft.

UNION COUNTY—SMACKOVER

E. L. Chapman's No. 1 Bradley, 510 ft. W, 150 ft. N, SE cor. SW NW, Sec. 2-16-16 ..... Derrick.
E. L. Chapman's No. 1 Purifoy, 585 ft. W, 150 ft. S, NE cor. NW SW, Sec. 2-16-16 ..... 400 ft. fluid in hole; waiting on standard rig; T.D. 2,150 ft.
Lovett et als' No. 1 Goodwin & Stone, Sec. 3-16-16 ..... Coring 2,910 ft.
A. H. Ramage's No. 1-A James, Sec. 6-16-15 ..... Installing vacuum system; T.D. 1,984 ft.

EAST TEXAS

MARION COUNTY

Pettit Oil Co.'s No. 3 Rives, N. G. Noll Sur. ..... Tested dry 2,279 ft; pulled liner to deepen.

HARRISON COUNTY

Mason et als' No. 1 Dean, J. W. Crofts Sur. ..... S.D. for orders; T.D. 2,185 ft.

PANOLA COUNTY

Calatex O. & G. Co.'s No. 4 W. C. Agurs, J. Womack Sur. .. Cmtd. 6-in. 2,987 ft.
Eureka Nat. Gas Co.'s No. 1-B Gully, Jas. Matthews Sur. .. Drlg. 2,125 ft.
Magnolia Pet. Co.'s No. 4 T. C. Adams, E. Jones Sur. .. Drlg. sandy shale 1,966 ft.
Magnolia Pet. Co.'s No. 3 Ella Barker, B. C. Jordan Sur. .. Drlg. lime 2,596 ft.
Magnolia Pet. Co.'s No. 16 Carrie G. Steele, B. C. Jordan Sur. ..... Fishing for drill stem 2,466 ft.
Magnolia Pet. Co.'s No. 1 Leigh-Trosper, B. Stephenson Sur. ..... Old well drilling deeper; rig up; T.D. 2,618 ft.
D. Thomason's No. 3 G. C. Tiller, Jos. Story Sur. ..... Spudded July 5; cmtd. 10-in. 80 ft; Drlg. 150 ft.
Natural Gas Prod. Co.'s No. 9 Roquemore, B. C. Jordan Sur. ..... Fish. for drill stem; T.D. 2,286 ft.
Nemours Corp.'s No. 4 Tiller, E. F. Mitcheson Sur. ..... Drlg. 8-in. plug 2,265 ft; T.D. 2,316 ft.
Paul C. Warren's No. 1 F. M. McNeese, A. Booker Sur. .. Derrick.

SOUTHWEST TEXAS

(Continued from Page 54)

indicates at least that the oil pool does not lie to the south. A new location will be made to the west of No. 1.

Sun Oil Co. No. 1 Lopez in Survey 730 and a couple of miles southwest of the Humble's Kohler oil pool, is drilling at 2,913 feet which is deeper than the Humble's Kohler production by a few feet only. If there is any difference in elevation in favor of the Sun test it may still have a chance. At any rate a few more days will tell so far as that sand is concerned.

Corpus Christi Area

The Corpus Christi area developed very little of interest the past week. Humble Oil & Refining Co.'s No. 4 Flato in the Kingsville Field is making hole at 6,710 feet now the deepest hole in Southwest Texas that is driling and there are only two others, both in the old Luling Field, that ever reached a greater depth.

There is some active wildcat play about to break loose in Jim Wells, where C. E. Wolcott has been blocking some of the choicest. The north third of the county has several blocks set off and at least one test is due soon. In northern Bee County, Mission Drilling Co. is down 1,520 feet in its No. 3 Ray, 3 miles east of No. 2 Ray, which is a good big gas well. No. 1 Ray, the discovery well, is being worked over. It was not drilled in the first instance as deep as No. 2 and was not as good a well. It is 600 feet from No. 2. The company has been working a month trying to get the hole in shape to deepen and is still working on it. No. 3 is only about half way to the sand. It is 3 miles away so it will be several days yet before the next important piece of news comes from the field. It is a unit rule field with the Mission Drilling Co. owning it all, so there are no offsets.

Southwest Texas

Branyon	36
Bruner	48,831
Dale	457
Gonzales	0
Kingsville	252
Larremore	161
Luling	11,345
Lyton Springs	989
McMullen County	55
Medina County	32
Mirando	11,149
Somerset	1,866
Yoast	1,080
Total	76,253
Week ending July 20	76,474
Decrease	221

COMPLETIONS

Bastrop County

Trapshooter Reilly's No. 6 Yost, A. Garcia Survey, completed 1,495 feet total depth, topped Serpentine, small pumper. This well is on lease acquired of Rydal Oil Corp.

Caldwell County

Humble Oil & Refining Co.'s No. B-3 Floy Gray, James Hinds Survey, 450 feet north line, 150 feet east line of Floy Gray "B" lease, completed at 2,684 feet. Initial production 150 bbls. on pump. Its No. 1-D Floy Gray, James Hinds Survey, completed at 2,698 feet, initial production 125 bbls. on pump. Its No. 6 L. G. Hanson, James Hinds Survey, completed at 2,733 feet; initial production 50 bbls. on pump. Humble Oil & Refining Co. and Luling Oil & Gas Co.'s No. 4 C. F. Dye, James Hinds Survey, completed at 2,673 feet, swabbed 775 bbls. in 24 hours. Their No. 5 T. A. Tiller, completed at 2,663 feet, will pump approximately 700 bbls.

The Texas Company's No. 2 J. Moore, completed at 1,400 feet, 10 bbls.

Duval County

Humble Oil & Refining Co.'s No. 29 Kohler, Survey 395, completed at 1,812 feet total depth. 10 bbls.

Humble Field—Duval

Humble Oil & Refining Co.'s No. 22 Kohler, Survey 395, 495 feet west line, 165 feet north line, at 1,854-78 feet, showing oil, gas and salt water; No. 23 Kohler, Survey 404, located 1,485 feet south and west lines, at 2,271 feet, drilling; No. 29 Kohler, Survey 395, located 165 feet south and west lines, at 1,807-12 feet in sand; No. 30 Kohler, Survey 169, located 165 feet north and west lines, at 1,807-12 feet in sand, set 6⅝-inch casing; No. 31 Kohler, Survey 172, 495 feet east line, 165 feet north line, at 1,783 feet tested salt water, standing; No. 32 Kohler, Survey 399, located 495 feet east line, 165 feet south line, at 639 feet drilling. Sun Oil Co.'s No. 1 Lopez, Survey 731, located 15 feet north line, 2,000 feet east line, at 2,764 feet drilling, tested small oil show and salt water.

Schoolfield-O'Byrne Field

Magnolia Petroleum Co.'s No. 4 Hahl, Survey 250, Block 24, 150 feet north line, 450 feet east line, at 1,762 feet drilling; No. 5 Hahl at 1,762 feet drilling; No. 6 Hahl, Survey 250, Block 24, located 150 feet north line, 1,050 feet east line, location; No. 7-B Hahl, Survey 61, located 650 feet south line, 2,950 feet east line, at 3,760 feet drilling. S. & O. Oil Co.'s No. 6 Hahl, Survey 250, Block 23, located 150 feet south line, 1,050 feet east line, at 1,900 feet drilling.

Driscoll Field

The Texas Company's No. 1 Hyatt, Block 25, Sweded Farm Tracts, 660 feet east line, 1,960 feet north line, at 150 feet drilling.

Randado Field—Jim Hogg

T. J. Conway's No. 3 Leyendecker, Survey 234, at 1,200 feet drilling. Randado Oil Corp.'s No. 35 Palacious, Survey 291, Block 2, located 150 feet south line, 450 feet east line, at 100 feet is standing.

Henne-Winch-Farris Field

George S. Marshall's No. 4 Holbein, Survey 11, Block 10, Share 3, 150 feet south and west lines, has derrick up; No. 5 Holbein, Survey 15, Block 10, Share 3, 150 feet north and west lines, is derrick. Magnolia Petroleum Co.'s No. 1 J. M. G. Martinez, east half of Survey 6, located 150 feet north and west lines, is derrick. W. R. Shankles' No. 1 Holbein. Las Animas Grant Survey, Share 3,150 feet north and west lines, Hogg Ridge subdivision, has spudded in.

Schott Field—Webb

Livingston & Payne's No. 1 Guerra-Ochoa, Survey 58, located 917 feet east line. 470 feet south line, at 1,649 feet standing, report having set casing in error.

Mid-Ojuelos Field

Crown Central Petroleum Corp.'s No. 1 E. Garcia. Survey 463, located 900 feet east line, 150 feet south line, at 1,579 feet total depth, tested dry, standing, waiting orders.

Carolina-Texas Field

Carolina-Texas Oil Co.'s No. 8 Benavides, Survey 683. Block 12, located 150 feet south line, 450 feet west line, is rigging up. Trapshooter Reilly Oil & Royalties Co.'s No. 2 Benavides, Survey 685, located 1,170 feet west line, 150 feet north line, at 1,600 feet drilling.

Magnolia-Cole Field

Cole Petroleum Co.'s No. 67 Benavides, Survey 412. Block 12, located 313 feet east line, 160 feet north line, at 38 feet standing. Magnolia Petroleum Co.'s No. 1 J. G. Valdez, Survey 754, Block 15, located 150 feet south and west lines, is derrick; No. 1 A. Benavides, north half Survey 660, located 660 feet south and east lines, derrick; No. 1 M. Benavides, north half NW Section 660, located 660 feet south and east lines, at 2,900 feet drilling; No. 1 C. Benavides, Survey 662, located 660 feet north and east lines, location.

Cole Gas Field

Southern Oil Co.'s No. 1 King-Harper, Survey 323, located 337 feet north line, 1,560 feet east line, ready to spud in (name changed from Shepard and others). John J. O'Hern's No. 2 Benavides, SE NW Survey 694, located 660 feet north and west line, spudded in, location changed. O. W. Killam's No. 11 Bruni, Survey 3, at 200 feet drilling. Magnolia Petroleum Co.'s No. 1 O'Hern-Benavides, Survey 694, Block 2, located 150 feet south and east lines, location.

Jennings Field—Zapata

South Texas Production Co.'s No. 1 Roy Jennings, Mira Flores Grant Survey, 18 055 feet southwest lines, 11,040 feet southeast lines, at 2,228 feet drilling; No. 5 Joe Jennings, Cerrito Blanco Grant Survey, 2,775 feet northeast lines, 1,585 feet northwest lines, at 50 feet drilling. H. Muckelroy, Jr.'s No. 2 Trevino, Survey 66, Block 3, located 150 feet northeast corner, at 1,286 feet drilling. Killam Duggan's No. 5 Cuellar located 2,900 feet east line, 1,350 feet south line, of 1,772-acre tract at 200 feet drilling.

Mirando Valley Field

O. W. Killam's No. 1 Flores, Survey 240, located 850 feet southeast lines, 560 feet northeast lines, at 800 feet drilling.

Pettus Field—Bee

Mission Drilling Co.'s No. 1 Ray at 2,600 feet trying to pull 6⅝-inch casing to reset; No. 3 Ray Ranch, 3 miles east of No. 2, at 1,520 feet, is drilling in shale. Nichole and others' No. 2 Hicks, at 2,100 feet drilling.

Somerset Field—Atascosa

Schimmel Production Co.'s No. 3 H. F. Gayle, C.E.P.I.&M. Survey, Block 2, 946 feet east of No. 1 location.

Yost Field—Bastrop

The Texas Company's No. 8 Yost, A. Garcia Survey, is derrick.

Dobrowolski Field—Bexar

Amelia Balzart's No. 3 J. P. Adams, 150 feet from road offsetting No. 1, has derrick up. W. W. Richardson's No. 1 G. Schmetz estate, P. L. Buquor Survey, 131 feet north line, 150 feet west line, at 210 feet drilling.

Gas Ridge Field

Medio Oil Co.'s No. 2 Hamilton Land Dev. Co. L. Munos Survey, 200 feet east line, 1,375 feet north line, at 470 feet drilling.

Joe Bruner Field—Caldwell

J. W. Allen's No. 1 A. B. Jackson 50 acres, Spencer Morris Survey, moving in rig. Tip de Arman's No. 3 G. F. Carter, Hinds Survey, 50 feet north and west lines, location. E. R. Brawn and C. O. Miller's No. 2 R. W. Carter, Gerren Hinds Survey, 150 feet north and west lines, derrick; Cranfill & Reynolds' No. 3 Hanson, James Hinds Survey, at 2,735 feet in Edwards; No. 2-A J. L. Northcut, S. Shupe Survey, 300 feet southwest of No. 1, location; No. 3-A J. L. Northcut, S. Shupe Survey, 300 feet northwest of No. 1, at 2,665 feet in Georgetown. Forest Oil Co.'s No. 1 M. H. Woods, Isaac Weldon Survey, Block 35, south central part of lease, location; No. 1 T. Enriquez, Luling Townsite, Block 32, center of Lot 32, location. Gulf Production Co.'s No. 5 J. L. Northcut at 2,670 feet, waiting on pump; No. 7 J. L. Northcut, James Hinds Survey, at 2,365 feet in chalk. T. C. Hadley's No. 1 J. M. Hanson, James Hinds Survey, 150 feet south and east lines, at 2,640 feet shut down; No. 3 Merriwether, A. Floyd Survey, at 2,753 feet, installing pump; No. 4 Merriwether rigging up. Humble Oil & Refining Co.'s No. B-2 Floy Gray, James Hinds Survey, 150 feet south and east lines, at 2,681 feet in Edwards waiting on pump; No. 8-B Moses & Baggett, S. Shupe Survey, at 2,259 feet in Taylor Marl; No. 9-B Moses & Baggett at 2,365 feet in chalk, standing; No. 10-B Moses & Baggett, S. Shupe Survey, 1,514 feet south line, 450 feet east line, at 2,686 feet in Edwards, topped at 2,680 feet; topped chalk 2,450 feet; No. 11-B Moses & Baggett, S. Shupe Survey, located 1,050 feet south line, 750 feet east line, at 1,892 feet in sticky shale, drilling; No. 12-B Moses & Baggett, S. Shupe Survey, 450 feet south line, 1,050 feet east line, at 2,382 feet drilling in Taylor; No. 2-A J. A. Northcut, James Hinds Survey, 450 feet south line, 150 feet east line at 2,475 feet drilling, topped chalk 2,440 feet; No. A-3 J. L. Northcut, James Hinds Survey, 150 feet north line, 450 feet west line, at 2,385 feet in chalk; No. 5-A J. L. Northcut. James Hinds Survey, 226 feet north line, 1,446 feet west line, at 2,468 feet in chalk, topped at 2,270 feet; No. 1-B J. L. Northcut at 2,297 feet in chalk, topped at 2,225 feet; No. 3-B J. L. Northcut at 2,370 feet in chalk, topped 2,265 feet, swabbing; No. 1-B Clyant Smith, 2,538 feet in Buda, rigging up to deepen, previously reported as completed; No. 2-B Clyant Smith at 1,744 feet in shale; No. 6-B Clyant Smith, James Hinds Survey, 150 feet south and east lines, at 2,101 feet fishing. Humble Oil & Refining Co. and Luling Oil & Gas Co.'s No. 5 C. F. Dye, 492 feet south line, 765 feet west line, at 2,650 feet waiting on cement; No. 3-A Floy Gray, 150 feet south line, 573 feet west line, at 2,689 feet waiting on crew; No. 4-A Floy Gray, James Hinds Survey, 150 feet north line, 750 feet west line, at 2,660 feet in Georgetown, waiting on cement; No. 5-A Floy Gray, James Hinds Survey, 150 feet north and west lines, at 2,569 feet in Del Rio; No. 6-A Floy Gray, 525 feet south line, 820 feet west line, at 2,060 feet in Taylor; No. 7-A Floy Gray at 2,381 feet in chalk; No. 4-C Floy Gray, 571 feet north line, 750 feet west line, at 2,645 feet in Georgetown, set 6⅝-inch casing; No. 5-C Floy Gray, James Hinds Survey, 150 feet south line, 760 feet west line, at 2,655 feet Georgetown, waiting on cement; No. 4-A M. B. Johnson, 150 feet north line, 573 feet west line, at 2,665 feet waiting on cement, topped chalk 2,215 feet; No. 6 T. A. Tiller, 450 feet north and east lines, at 2,639 feet in Georgetown, preparing to set casing. Magnolia Petroleum Co.'s No. 1 Merriwether, A. Floyd Survey, 450 feet west line, 100 feet north line, at 100 feet drilling. Nash, Windfohr & Perry's No. 3-C Davis, 300 feet east of Atlantic No. 1 Davis, 150 feet north line Davis "C" lease, at 2,720 feet in Edwards, topped chalk 2,395 feet, set 6⅝-inch casing 2,715 feet. Shell Petroleum Corp.'s No. 2 Clyant Smith, James Hinds Survey, at 2,672 feet in Edwards, underreaming. The Texas Company's No. 8 Merriwether, at 2,786 feet total depth, standing shot casing; No. 10 Merriwether, 150 feet west line, 300 feet south of No. 7, at 2,190 feet in Taylor Marl.

Kingsvile Field—Kleberg

Humble Oil & Refining Co.'s No. 4 Flato, Block 10, Section 40, 250 feet east line, 450 feet north line, at 6,710 feet, drilling.

Cartwright Field—Live Oak

Houston Oil Co.'s No. 2-A Brown, M. B. Kilvin Survey, 1,200 feet northeast of No. 1, location.

Adams Field—Medina

Southern Gas Utilities Co.'s No. 22 M. M. Adams, F. Mumme Survey, 2,308 feet west line, 644 feet south line, at 80 feet set surface casing.

Agua Dulce Field—Nueces

Agua Dulce Oil & Gas Co.'s No. 1 Otto Wolters, Section 34 Benton's Pasture, at 2,047 feet standing. R. & G. Corp.'s No. 1 Brown, George H. Paul subdivision, C SE NW Section 87, location; No. 2 Ed Allen, 150 feet north and east lines, Lot 5, Section 6, about 1,900 feet east of No. 1 at 1,986 feet standing. (Sold to Moody-Seagraves interests.)

White Point—San Patricio

Spencer & Rhodes' No. 1 Texas Company fee at 2,290 feet standing to see if gas volume will come up.

Nursery Field—Victoria

Humble Oil & Refining Co.'s No. 3-A J. J. Welder, D.L.&C. Survey, 1,634 feet southeast lines, 736 feet southwest lines, at 3,300 feet drilling.

ABANDONED TESTS

Bexar County

American Central Oil & Gas Co.'s No. 4 McConnell, W. G. Baker No. 138 Survey dropped from reports until operations are resumed. Cleaning out old wells.

Nueces County

Spencer & Rhodes' No. 1 The Texas Company fee, is not drilling in Nueces County, duplication of San Patricio.

NEW LOCATIONS

Caldwell County

Nash, Windfohr & Perry's No. 4-C Davis, A. Floyd Survey, 375 feet south of No. 3, location. Humble Oil & Refining Co. and Luling Oil & Gas Co.'s No. 5-A M. Johnson, 150 feet north and west lines at 2,429 feet, in chalk. Same company's No. 6 C. F. Dye, 492 feet south line, 465 feet feet west line, rigging up.

Duval County

G. M. Partee's No. 5 Moody, Survey 60, located 1,848 feet northwest lines, 150 feet west line, rigging up.

Jim Hogg County

Alworth, Stevens, Hill & Co.'s No. 14 M. Garza, Survey 39, Block 8, located 204 feet southeast lines, 570 feet north-

east lines, at 1,016 feet, is preparing to resume drilling.

Webb County

Foster Barsley's No. 6 Webster, NE SW Survey 684, 150 feet south and east lines, rigging up.

CALIFORNIA FIELDS

(Continued from Page 65)

The Ring Petroleum's No. 1 Nugent has definitely marked the southern boundary as it was a duster and with tentative preparations under way to abandon No. 1 Mesa School, the General Petroleum has established the western limits of production. It has been quite evident from the early stages of development that the productive area at Santa Barbara would be extremely limited but no one believed that it would be as small as it has actually turned out to be.

The Union's No. 1 Carpenter, a recent completion in this area, is capable of pumping about 200 bbls. daily from 2,186 feet but this project has been standing shut in since completion due to the absence of storage facilities and the inability to move production out of the area. No pipe lines are available and it is not likely that anything will be done along this line as there is not sufficient production to justify the necessary expenditure. The Craft Petroleum Co.'s No. 1 Foster, located less than 150 feet east of the Union's No. 1 Carpenter, is pumping approximately 250 bbls. of fluid daily from 2,132 feet but the output is cutting in excess of 50 per cent. The General Petroleum is contemplating abandoning No. 1 Lomis, the discovery well which was taken over from the Olympic Oil & Refining Co. due to the inability to effect a satisfactory water shut off, although a little further work will be undertaken before tearing equipment out. No. 2 Lomis on the same property is also tentatively scheduled for abandonment as developments up to the present time do not justify further attempts to develop commercial production. The General Petroleum had already abandoned No. 1 Weir as a dry hole at 2,375 feet.

From all indications, the Santa Barbara Field has definitely passed out of the picture as far as production is concerned and I am of the opinion that we will see the abandonment of many wells in this area in the very near future. Drilling operations have been suspended on all projects with the exception of a limited few and only the development of a deeper productive horizon will prevent a total loss to operators. The sudden crisis reached at Santa Barbara has left many operators dumbfounded and several have stepped out west of the field in the vicinity of Veronica Springs where three wells are scheduled to be drilled in the very near future. This work is projected on the possibility that local faulting has created an abnormal condition in the Santa Barbara mesa area and that the original field may be located to the west. The disastrous results which have followed development work recalls a similar unfavorable situation at Lawndale where town lot drilling resulted in the loss of several million dollars last year. Four additional holes were abandoned at Lawndale this week. George F. Getty signified his intention of abandoning No. 1 in Section 17-3-14 and No. 2 in Section 21-3-14. The Galconda Petroleum has abandoned No. 1 in Section 16-3-14, and the Globe Lease & Royalty Co. has plugged up No. 1 Jones in Section 21-3-14.

Summerland

The Lincoln Drilling Co., which discovered a new sand in the Summerland Field of Santa Barbara County a few weeks ago, has just recompleted No. 1 Williams with a potential daily production of 400 bbls. This well was originally bottomed at 1,250 feet but was redrilled and deepened this week to 1,417 feet and then plugged back to 1,360 feet as a precautionary measure. A total of 285 feet of oil sand has been penetrated and this thickness should result in sustained production. One of the most interesting features in connection with the completion of No. 1 Williams is the fact that although it only tests 19.0 degrees A.P.I., the oil contains around 15 per cent gasoline and 4 per cent kerosene. It has none of the characteristics of the heavy Summerland crude except in gravity and appearance. George F. Getty has already started an offset to the Lincoln's discovery well and drilling operations should get under way within the next few days. The Southern Exploration Co., which is drilling a well on the Twitchell property north of the discovery, passed the 1,000-foot level a few days ago but the outlook is not any too promising as the well logs of these two projects do not seem to correlate. The Gaviota Oil Co. and the Acuarium Petroleum are also making preparations to inaugurate new work although actual spud may be retarded pending further development.

Seal Beach

The Associated Oil Co. recompleted No. 3 Bryant in the Seal Beach Field during the early part of the past week and this former upper zone producer was returned to production flowing 761 bbls. daily from 5,543 feet. Two other potential producers are nearing completion in this field and they should be tanking oil in the very near future. Seven holes were abandoned in the Alamitos town lot section of the Seal Beach Field this week and several more are anticipated in the near future. The Pacific Western Oil Co., which took over the holdings of the Petroleum Securities last year, cleaned house by abandoning six depleted producers. These were No. 7 Naples, No. 1 Dexter, Nos. 3-A and 6-A on the Bryant lease and Nos. 2 and 3 on the Parr Person property. Paul Getty abandoned No. 5 Cleaver, a former producer. Drilling operations in the Richfield district resulted in the completion of one new well this week, the Continental Oil Co. finishing No. 3 Richfield Community doing 194 bbls. daily from an even 4,400 feet. At Long Beach, Dabney & Johnston successfully finished No. 35 doing 865 bbls. of clean 27.9 gravity oil daily from the shallow sand at 4,755 feet. The Macmillan Petroleum Co. also increased its list of producers when No. 10 Dollar Hyde was finished pumping 265 bbls. daily from 4,425 feet. The A. T. Jergins Syndicate finished No. 6 Robinson doing 535 bbls. per day from 4,662 feet and immediately shifted the crew to No. 7 on the same lease and made spud. J. L. Roggie's No. 4 Signal came in under a natural flow doing 500 bbls. of 28.1 gravity oil and 1,600,000 feet of wet gas daily upon completion at 6,580 feet. The Shell's deep test, No. 11 Nesa, was rotating ahead yesterday morning at 9,120 feet.

CANADIAN FIELDS

(Continued from Page 61)

feet in the lower Bentons. This is the most southerly test now drilling. Alberta Pacific Consolidated's No. 2, LSD 5, Section 20-19-2w5, has spudded in.

Mercury Oils' No. 2, LSD 12, Section 4-19-2w5, is reported rigged up ready to spud in.

Hylo Oils' No. 1, LSD 12, Section 4-19-2w5, is drilling below 100 feet. The location is 3¼ miles southeast of Home's No. 1 and a quarter mile south of the old Record well, abandoned some years ago at 4,327 feet after getting a good show of light crude in what was apparently the Fernie shale horizon. The Record in its time was the deepest well in Canada, and finished with several strings of tools hopelessly lost. Hylo is using standard tools and running two shifts.

Gasolite Oil & Development Co.'s No. 1 has been spotted in Section 3-19-2w5. Work will probably be started in August. J. S. Splane of Calgary is managing director, and London, Ontario, interests are largely financing the test. The company is planning to drill a second test on the Rickert structure. Saxon Oils, Ltd., of Vancouver, is also planning to drill a new test in the south end of Turner Valley.

Dallas-Calmont Merger

Shareholders of Dallas Oil Co. will meet on August 8 to confirm a resolution of the directors providing for amalgamation with the Calmont company, under which Dallas shares will be exchangeable for the Calmont on a 3-to-1 basis. The Dallas holdings taken over under the amalgamation include 1,340 acres in Turner Valley, 855 acres in Moose Mountain district and 1,400 acres in the Milk River area. The merger will give the Calmont company 10,719 acres in various parts of Alberta, with a total of 3,258 acres in the Turner Valley.

For its No. 2, LSD 4, Section 16-19-2w5, the East Crest Oil Co. has let the first "turnkey" contract ever made in the Turner Valley Field for drilling to big production in the limestone. Boller, Sherman-Boller, Inc.,of Tulsa, Okla., are the contractors. The field has now reached the stage where companies can figure the entire cost and get wells contracted to the production level. Heretofore contracts have been made for wells to the top of the lime, after which the company assumed the liability for completion. It has usually been the practice for companies to pay contractors at various stages, usually every 500 feet or so; but the East Crest under this agreement pays when the well is completed. Work is to start August 10. Location is 860 feet south of East Crest's No. 1, and it is estimated the test will get the lime at 3,750 feet, 400 feet higher than No. 1, which is now at 3,937 feet some 200 feet above the lime. Rotary equipment will be used, and the contractors will introduce the first Sheldon-Burden control used in the field.

In the central Turner Valley, Sentinel Oil Co.'s No. 1, Section 8-20-2w5, east of the main drilling operations, caught fire, completely destroying the rig. The rig will be replaced at once.

Calmont Oils' No. 3, LSD 2, Section 1-20-3w5, is rigging up. Okalta Oils' No. 1, LSD 1, same section, has cellar cemented and control-head fastened down with anchor bolts and is increasing back pressure to secure maximum crude naphtha recovery. The well is making around 400 bbls. a day. Okalta's No. 4, LSD 8, same section, has spudded in. Okalta's No. 5, LSD 7, same section, is rigged up ready to spud in.

Regent Oil Co.'s No. 3, LSD 16, Section 1-20-3w5, is rigging up. McLeod's No. 4, same LSD, will resume drilling at 1,308 feet in the lime, to increase production from the lower horizon, which is now around 120 bbls. a day.

New McDougall-Segur Oil Co.'s No. 2, LSD 14, Section 12-20-3w5, is making a steady crude naphtha recovery of around 68 bbls. from the deep lime. Illinois-Alberta Oil's No. 3, same LSD, will be started as soon as No. 2 is brought into production. Derrick has been up since last spring. Structure Oil & Gas' No. 2, LSD 6, same section, is working on derrick.

North End Turner Valley

In the north end of Turner Valley, Model Oils' No. 1, LSD 8, Section 22-20-3w5, is the center of interest. At 5,210 feet it encountered a considerable show of medium crude, testing around 30 gravity, apparently coming from the Dalhousie sands. The test has since been deepened to 5,235 feet with the oil standing 400 feet in the hole. It is about 300 feet above the lime. Some small shows of oil were previously met. Model's No. 1 has been carried to this depth with a 10-inch hole, the deepest of its size in Canada. United Oils' No. 4, LSD 2, Section 24-20-3w5, some time ago encountered light crude in the same horizon; but this is the first show of medium to heavy crude met in the north end. The test will be carried deeper and if commercial production is not secured in the present horizon will be drilled to the big production in the lime.

Spooner Oils' No. 2, Section 24-20-3w5, is drilling 547 feet in the lime at 5,622 feet, with the drill in a hard formation. It has a small potential crude naphtha recovery, around 50 bbls., and will be continued 1,000 feet in the lime if necessary. Spooner's No. 3, same section, is working on derrick for a standard test to spud in before August 1.

Vanalta Oils' No. 2, Section 34-20-3w5, is rigged up ready to spud in.

Calmont Oils, Ltd., has taken over the assets of the Seneca Oil Co. The assets include 80 acres in the north end of Turner Valley, and the unfinished Seneca's No. 1 test in LSD 1, Section 34-20-3w5, which has been standing at 4,930 feet, as well as a standard outfit, gas line and camp buildings. A heavy duty rotary outfit will be brought in to finish the test.

Dalfin Petroleums' No. 1, LSD 5, Section 34-20-3w5, is rigged up and waiting for boilers. Innerfold Oils' No. 1, to the north of the other tests, is preparing site.

Stonewall Oil Co., of Calgary, is preparing for a test on the Black Diamond structure in the north end of Turner Valley. The company also holds acreage on the Highwood structure. Officers are: president, F. Snell, Calgary; vice president, T. C. Milnes, Claresholm; directors, Spencer Hughes, Strathmore; Ross Alger, Edmonton; George Patrick, Stettler; managing director, J. J. McCoig, Calgary.

Hallmark Petroleums, Ltd., has let contract for cellar, derrick and camp buildings for No. 1 test in Section 24-20-3w5. Mill City's No. 1 will probably be started before the end of September.

Morley Reserve

In the Morley Reserve area, Wabash Oils' No. 1, got an additional show of gas with some traces of oil 975 feet in the deep lime at 2,483 feet depth. At this depth the drill would be nearing the lower lime horizon found production in McLeod's No. 4 test in the Turner Valley. Wabash's No. 1 got only a small flow of gas in the upper lime. On the Herron structure, north of Turner Valley, Herron Petroleum's No. 1 has derrick up and is installing standard tools.

Gibraltar Oils' No. 1, LSD 4, Section 28-20-3w5, is reported rigging up. Spartan Oil Co.'s No. 1, LSD 2, Section 35-21-4w5, is reported rigging up.

On the Ghost River structure, four tests are likely to start before the close of the present season. This area has not previously been drilled. The field is not far from Cochrane, in Townships 26, 27 and 28, Range 5w6. Some 7,000 acres on the structure are held by Ghost River Holdings, Ltd. Of this area, 2,000 acres have been sub-leased to Mogul Petroleums, Ltd. Mogul's No. 1 is digging cellar in LSD 1, Section 19-27-6w5. Some 1,200 acres have been taken by Cochrane Oils, Ltd., financed by Vancouver interests, drilling to start this year. A British Columbia syndicate has taken two sections, No. 1 test to start by November, 1929. Baymar Oils, Ltd., has made its No. 1 location in Section 5-26-6w5, on Hudson's Bay-Marland acreage south of the Ghost River Holdings territory. This test will probably spud in next month. Imperial Oil, Ltd., holds some 4,000 acres north of the Ghost River block, but will probably do no drilling, pending the outcome of the other tests.

On the Calling Valley structure, Anglo-Indian Oils Corp.'s No. 1, LSD 4, Section 31-21-3w5, is preparing to start work. The field is in Townships 21 and 22, Range 3w5, and a geological investigation made some years ago by E. H. Cunningham-Craig indicated possibilities of oil between 1,400 and 2,200 feet.

High River District

In the High River district, a Winnipeg syndicate is reported to have purchased oil and surface rights in the foothills within a mile of the Prince of Wales E. P. ranch and are preparing for a test.

In the Pincher Creek district, Weymarn Petroleums' Mount Royal No. 1, LSD 4, Section 7-6-1w5, is drilling at 850 feet after setting 12½-inch casing. Additional small shows of gas have been encountered.

In the Milk River district, Lethbridge Petroleum & Refining Co. is contracting for a series of five core-drill tests on its acreage, following which No. 1 commercial test will be started.

Lion's Gate Oil Co.'s No. 1, LSD 1, Section 33-6-15w4, is reported rigged up ready to spud in.

Hudson's Bay-Marland

In the Champion district, Hudson's Bay-Marland Oil Co., Section 9-16-23w4

THE LOW BID IS OFTEN THE HIGHEST

When the pipe is not laid within the time specified —when leaks develop—when the refiners fail to get their oil supply—the extra cost to the builder may run into the thousands. Even though there is a time penalty clause, the maker of the contract is rarely re-paid for the cost caused by delays and inexperienced workmen.

Truman-Smith know from experience the necessary equipment to use to finish on time; how to allow properly for expansion and contraction; how every joint should be welded, screwed or Dresser coupled. They employ only the highest skilled labor. When Truman-Smith undertake a job it is not only finished on time, but in A-1 condition. They may not always be the lowest bidder—but you can have no better insurance against these extra costs than to turn your pipe line construction over to this old, experienced Company.

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Modern Cleaning Machine and Tractor to Raise Pipe Capacity 20 Tons

Part of Our Air Compressor Equipment for Rock Drilling

The TRUMAN-SMITH CONST. Co.

EL DORADO, KANSAS.

is drilling 13½-inch hole after running 15½-inch casing to 1,900 feet. Hudson's Bay-Marland's Lomond test, Section 23-17-18w4, is reported fishing at 950 feet.

In the Viking Field, east central Alberta, Northwestern Utilities' No. 16, SW. Section 7-49-12w4, is reported finished 13 feet in the Viking sand at 2,140 feet, with an open flow of 8,418,700 feet a day. The test was completed in 42 days. Northwestern Utilities' No. 17 is drilling, and No. 18 is reported digging cellar.

On the Ribstone Field, Meridian Oils' No. 1, LSD 1, Section 16-45-1w4, is still bailing and making 50 to 100 bbls. a day. The sand trouble is being gradually overcome, and ultimately the well will be pumped. About 500,000 feet of gas is coming with the oil and is being used for camp purposes.

Peninsular Oil Co.'s No. 1, close to Wainwright, has spudded in with a rotary outfit. Hungerford Drilling Co. has unloaded rotary outfit for the Duluth Syndicate's No. 1 test in Section 29-48-10w4, 12 miles northeast of Kinsella. Daugherty Petroleums' No. 1 is waiting for rotary equipment. Harris Brothers, contractors, are bringing in a rotary outfit for a test for Wainwright Petroleums in LSD 4, Section 15-45-6w4. Blair & Stevens have rotary outfit rigged up ready to spud in for Beth-Wain Oils' No. 1.

Ontario Fields

In the Ontario fields, Ajax Oil & Gas Co.'s No. 5 in Dover Township, Kent County, is reported drilling around 1,000 feet. In Howard Township, Union Natural Gas Co.'s No. 3 Ridgetown, near the Howard-Harwich town line, is reported drilling around 1,200 feet.

In Lambton County, the Leo Wilson Syndicate's test in concession 1 Moore Township, east and south of Courtright, is unofficially reported drilling in the Trenton limestone. Union Natural Gas Co.'s No. 41 in the east end of the Dawn Field is reported spudding in. Union's No. 40, Dawn Field, drilled into an old hole, and had to skid the rig a short distance.

In the Rainy River district, northern Ontario, Brown & Wade of Petrolia are reported drilling at 623 feet depth on a test for oil. A previous test in this area drilled last year failed to get commercial production.

In the James Bay area, Smith & Travers of Sudbury are continuing diamond drill tests for the Ontario government in the oil and lignite area on the Abitibi River near Blacksmith Rapids. Core from No. 1 test is unofficially reported to have shown a 20-foot deposit of lignite.

KANSAS FIELDS

(Continued from Page 52)

ly a Kansas geologist made a survey of the area and advanced the theory that this surface low might be over the Wilcox sand or silicious lime structure. The Milmac test was designed to test out this theory. There are several other sink holes in this vicinity, and if the Milmac Oil Co.'s test makes a producer, it will cause other tests to be drilled on similar structures. The sink hole on the Beihler farm is nearly circular. It is about 3 miles in diameter, with a maximum depth of 90 feet from rim to the center, and an average depth of 70 feet. The test was drilling at 2,585 feet on July 22. It is expected to reach the Wilcox sand around 2,900 feet.

Barnsdall Oil Co. is plugging an important wildcat test in Ness County. It had a small showing at 4,100 feet, but owing to the depth it was not deemed a commercial well. The test is No. 1 Lank, C SW, Section 35-18-21w, Ness County. It was abandoned at 4,614 feet. In the same county Continental Oil Co.'s No. 1 Aldrich, NE cor. SE, Section 7-18-25w, is the only other test drilling at the present time. It is at 2,400 feet.

Jarvis Test Abandoned

S. Jarvis and others' No. 1 Jellison, SE cor Section 13-10-15w, Osborne County, has abandoned its wildcat test at a total depth of 3,578 feet. It had only a few showings of gas while drilling.

Prairie Oil & Gas Co. has plugged its second wildcat test in Rooks County, the No. 1 Gick, C SW, Section 22-9-19w. The test found water in all the producing horizons and was abandoned at 4,127 feet.

Rice County leads the state with four new wildcat locations. This is in the limelight now on account of the high gravity showing of oil in the wildcat test in Section 21-20-10w. The new locations are Derby Oil Co 's No. 1 Johnson, SW cor. SE SE, Section 24-20-6w; Danciger Oil & Refining Co.'s No. 1 Bell, C NE SW, Section 16-19-8w; D. H. Langston's No. 1 Lumway, C NE SW. Section 2-20-9w; McColloch Oil Co.'s No. 1 William, C NE NE, Section 35-20-8w.

Russell County has one new wildcat location this week. Griffith and others' No. 1 Mansfield, SE cor. NE SW, Section 16-12-13w. Stafford County has a new wildcat location in Gibson and others' No. 1 Mueller, C NE SW, Section 11-23-14w.

Phillips Petroleum Co. has staked another new location in the western part of Trego County, the first wildcat test that company has started in that county. It is No. 1- Spitz, in SE cor. Section 21-12-25w, on a large block of acreage recently core drilled.

Butler County

Millmack Oil Co.'s No. 1 Clearwater, SW cor. Section 33-25-3, is spudding. Empire Oil & Refining Co. is moving material in for No. 3 Sherrock, SW cor. NE NE, Section 27-27-5. Empire Oil & Refining Co. is moving material in for No. 8-B Hutchinson, NE cor. SW NE, Section 27-27-5.

Empire Oil & Refining Co.'s No. 18 Hess, NW cor. SE NW, Section 18-26-5, has been completed for 200 bbls. in sand at 2.612-15 feet. No. 81 Koogler, NW cor. SE NE. Section 19-26-5. made 100 bbls. in Viola lime at 2,523-2,609 feet. No. 3-A Hutchinson, SE cor. NW NE, Section 34-27-5, is producing 200 bbls. from sand at 2,690-2,722 feet. Phillips Petroleum Co.'s No. 4 Tatum, SW cor. NW NW, Section 9-27-6, has been completed for 60 bbls. in sand at 2,748-62 feet.

Clay County

Derby Oil Co. made location for No. 1 Niemuller, C NW SW Section 19-10-3.

Coffey County

Hines and others staked location for No. 1 Barngrover, SW cor. NW, Section 7-23-15.

Cowley County

Lewis Production Co. made location for No. 1 Pierce, NE cor. NW SE, Section 30-31-6. No. 1 Sitton, SE cor. SW NE, Section 30-31-6, has been completed for 75 bbls. in sand at 2,905-41 feet.

Elk County

Union Gas Co. and others' No. 1 Scuhl, C SE NW, Section 1-31-9, is moving in material. Barber and others' No. 1 Brown, NE cor. SW, Section 12-30-9, is dry and abandoned at 2,710 feet. Frantz and others' No. 1 Spray, SW cor. SE SW, Section 12-31-10, has been abandoned at 2,264 feet.

Ellis County

Byrens and others moved the rig in for No. 1 Fischer, NW cor. SE, Section 4-11-20w. T. C. Johnson and others' No. 1 Robben, SW cor. NW, Section 15-14-16w, has been abandoned at 3,502 feet.

Greenwood County

Empire Oil & Refining Co. is erecting the rig for No. 3-B Edwards, SW cor. SE SE, Section 21-23-11. No. 4-B Edwards, SW cor. NE SE, Section 21-23-11, is also a rig under construction. The rig is going up for No. 1-C Patterson, NW cor. SW SE, Section 36-23-11. Foster Petroleum Co.'s No. 2 Scott, NE cor. SW SE, Section 7-24-12, has drilled to 1,825 feet and is testing. Houston-Oklahoma Oil Co.'s No. 13 Sullivan, SE cor. NW NW, Section 14-24-12, has the first break in the lime at 1,740-58 feet and is swabbing oil. Empire Oil & Refining Co. moved the rig in for No. 2 Hoggett, SE cor. NW, Section 9-25-13.

Transcontinental Oil Co.'s No. 4 Pixlee, SW cor. NW NE, Section 10-22-10, has been completed for 700 bbls. in sand at 2,249-66 feet. Empire Oil & Refining Co.'s No. 2 Holderman, NE cor. SE SW, Section 15-22-12, made 50 bbls. in sand at 1,764-72 feet.

Empire Oil & Refining Co.'s No. 2-B Edwards, NW cor. SE SE, Section 21-23-11, made 800 bbls. in sand at 1,866-1,957 feet. The Texas Company's No. 5-C Edwards, SE cor. NW SE, Section 21-23-11, has been completed for 350 bbls. in sand at 1.871-1,961 feet. Empire Oil & Refining Co.'s No. 2-A Patterson, SE cor. NE SW, Section 36-23-11, is making 225 bbls. in sand at 1,771-1,825 feet. Transcontinental Oil Co.'s No. 1 Holland, SW cor. NE, Section 36-23-11, is dry and abandoned at 1,975 feet.

Reed and others' No. 1-A Dales, SE cor. Section 2-24-10, has been abandoned at 2,306 feet. Sheedy and others' No. 3 Sharp, C N half N half, Section 5-24-13, was completed for 100 bbls. in sand at 1,593-1,611 feet. Shull Drilling Co.'s No. 1 Alliss, NE cor. SE NW, Section 17-24-13, made a 50-bbl. well in sand at 1,585-93 feet.

Harvey County

Joe Liggett and others moved the rig in for No. 1 Regier, SE cor. NW SE, Section 2-23-3w.

Lyons County

Gardon & Stats' No. 1 Murphy, NW cor. NE, Section 32-21-11, is a rig moving in.

McPherson County

McPherson Oil & Gas Co. and Shell Petroleum Corp. made location for No. 1 Hull. C SW, Section 11-19-2w. Derby Oil Co. made location for No. 1 Stuckey, C NE NW, Section 9-21-3w. Shell Petroleum Corp. is building the rig for No. 2 Ritz. SE cor. SW, Section 1-20-2w.

McPherson Oil & Gas Development Co.'s No. 1 Decker, C SE, Section 11-19-2w, has been completed for 18,000,000 feet of gas in sand at 2 887-2.914 feet. Shell Petroleum Corp.'s No. 1 Ritz, NW cor. SE SW, Section 1-20-2w, has been completed for 1,100 bbls. in sand at 2,961-66 feet and is pinched in.

Marion County

Connell and the Prairie Oil & Gas Co.'s No. 1 Jirak, SE cor. SW, Section 3-18-3, is dry and abandoned at 2,897 feet. Hartman & Skaer and White Eagle Oil & Refining Co.'s No. 1 Kline, NE cor. NW, Section 28-18-3, is dry and abandoned at 2,965 feet.

Morris County

Hiatt and others' No. 1 Smith, NW cor. SE, Section 35-15-5, is dry and abandoned at 2,380 feet.

Russell County

Mid-West Exploration Co. is building the rig for No. 4 Baxter, NE cor. NW

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LA.-ARK. WILDCATS

(Continued from Page 56)

7 feet in sand. Tunica's No. 48 L. & A. in Section 16-7-2e, cemented 6-inch at 808 feet and No. 49 in Section 17-7-2e, is a location. The company has drilled a dozen or so deep and shallow holes in this locality about half of which were small pumpers. Largely on the strength of this showing and also because it has a large block of acreage on the north shore of Catahoula Lake, Palmer Corp. has a magnetometer crew at work surveying the country between Jena and the lake, several miles southeast of town.

Palmer Corp.'s No. 1 Miles in Section 11-17-6, 5 or 6 miles northeast of production on the north edge of Richland proven area, was abandoned during the week as a dry hole at 2,723 feet, and although no showings of importance have been reported, location has been made for No. 2 Miles in the NE NE of Section 12-17-6.

Johnson-Gunmer Oil Co. abandoned No. 1 Cargile, Section 4-18-13, Urbana district of Union County, Arkansas, as a dry hole at 3,306 feet. Salt water and dust were the only products of tests made at 2,292-2,312 feet, 2,588 feet and 2,695 feet, and a core at 3,180 feet.

Mississippi Wildcats

Two Mississippi wildcats which had not progressed beyond the derrick stage were abandoned; Big Black Oil Co.'s No. 1 Southern Christian Institute in Section 30-6-4, Hinds County, and Edwards Oil Co.'s No. 4 Lewis, Section 36-16-5, same county.

Extension of the Dixie district of Caddo Parish, Louisiana, by D. C. R. Oil Co.'s No. 1 Oden in Section 20-19-14, is still to be proved. The well is standing 700 feet in oil from 2,423 feet and waiting on standard rig to pump. By next week's report day it should have been finished. Meanwhile Lide & Davidson's No. 1 Oden in Section 21-19-14, southeast of production, while not improving any with footage is still drilling. It tested salt water at 2,480-2.505 feet this week and was coring at 2,535 feet, 100 feet more hole than the producing wells in the district have. The same operators made location for No. 1 Hunter in the NW cor. Section 22-19-14, and Haynes Brothers made location for No. 1 Oden in the NE cor. NW Section 19-19-14, southwest of production.

J. P. White, who is deepening an old well in wildcat territory of the Monroe district, No. 1 Chess-Wymond, Section 32-19-6, Morehouse Parish, made a drill stem test at 2,608-16 feet which was dry. The well was abandoned originally at 2,570 feet. Haynes Oil Co. made location for a wildcat in the Ouachita Parish Section of the district, No. 1 Dixie Land Co. in Section 17-17-3, 5 miles southwest of Monroe.

R. L. Gay's No. 2 Sabine Lumber Co. in Section 13-7-14, Zwolle district of Sabine Parish, has a show of oil at 2,234 feet but bailed dry and is drilling below 2,450 feet. In Vernon Parish, the next south of Sabine, Gulf Refining Co. has geophysical crews working over the territory between Leesville and the Texas line, particularly the Nona Mills 150,000 acres, and also in Jasper, Sabine and Newton Counties on the Texas side of the state line.

Shelby County, Texas

In Shelby County, Texas, C. W. Robinson has sold the Benedum & Trees Oil Co. 8,500 acres centering 2½ miles south of Paxton on 5-year commercial leases for a reported price of $15,000 and one-eighth of the net proceeds. It is understood the purchasers plan two wells to be drilled within a year, the first to start on or before the expiraton of 6 months from date of transfer. Pigg & Davis have 16.000 acres blocked around the town of Rocky Branch in Morris County on five-year commercial leases and R. M. Hervey has 6,000 acres centering half way between Hughes Springs and Daingerfield which he is trying to turn for a well.

Rogers and others are trying to sell 400 acres of their block for $1,500 to help finance their No. 1 Enfelt on the R. M. Montgomery Survey in Camp County, to 3,000 feet. The well has been shut down since February at 1,920 feet after testing dry on a gas show in 9 feet of sand at 1,778 feet. Humble Oil & Refining Co. has a block of 5,000 acres on 10-year commercial leases extending from Pine into Upshur County.

Johnston Petroleum Co.'s No. 1 Stiles in the Edward Dean Survey 3½ miles west of Bagwell, Red River County, is drilling with cable tools at 1,950 feet. The well is in the southwest corner of a 13,000-acre block and is the company's second test, the first, on the C. H. Boone farm in the same survey, having been junked at 1,400 feet after getting an oil show from 1,381-86 feet. P. C. Warren and others operating as the Annona Syndicate have a block of 6,000 to 8,000 acres centering 2 miles east of Annona which was secured for a well. Location of the test, which is shut down at 1,960 feet and flowing a small amount of salt water, is a mile east of Annona. It has been carried as Shad Harper's No. 1 Garland on the Joseph Wagley Survey.

To Resume Drilling

D. M. Buffington and others, the White Rock Syndicate, are arranging to resume drilling No. 1 Hossier in the E. Hughart Survey which has been shut down at 1,905 feet for a year. It had gas shows at 1,393 feet and 1,887 feet and is in the center of a block of 12,000 acres. Albert Wooley has 8.000 acres at White Rock secured for a 2,500-foot test which he expects to begin by the first of January.

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Canada, capital, which has deposited $500,000 for development of their property, is moving in a heavy rig to start the first well on their 30,000-acre block south of the Texas & Pacific right of way between Annona, Avery, Box Elder and Lidia. It centers on the D. McKinney Survey and was secured on five-year commercial leases for a 3,500-foot test for which a $25,000 bond has been posted.

Sundby and others' No. 1 Faris in Section 27-15-15, a half mile or so northeast of production in the Ouachita end of Smackover, is standing 100 feet in fluid from 22 feet of broken sand, total depth 2,090 feet and is waiting for standard rig. Arpeco Syndicate's No. 1 Dennis in Section 11-20-23, just north of the Louisiana line and the Haynesville Pool in Claiborne Parish, made a dry test in red sandy shale at 3,555 feet and is drilling at 3,700 feet. W. M. Coates' No. 1 McDuffy in Section 32-19-17, Union County, a mile or so west of Junction City, made another test at 3,945-51 feet which, like the series at higher levels, was dry, and is drilling ahead. Root Refineries' No. 1 Oliver in Section 18-17-13, a half-mile south of production in the Champagnolle eastern extension, topped the red beds at 3,015 feet and was coring at 3,022 feet.

WILDCAT OPERATIONS IN LOUISIANA-ARKANSAS

NORTH LOUISIANA

BIENVILLE PARISH

Company, farm and location—	Remarks:
W. G. Gray's No. 1 Snyder, SW NE, Sec. 15-17-6	Tested S.W. at 2,842 ft. and 2,888 ft; S.D. 2,924 ft.

BOSSIER PARISH

Corbett and others' No. 1 Murff, SE cor. NE Sec. 18-17-11	Shut down 990 ft.
Nell & Lanier's No. 1 Biedenharn, SE cor. Sec. 23-21-14	Shut down 790 ft.
Triangle Drlg. Co.'s No. 1 Thigpen & Herold, 1,320 ft. W, 660 ft. N, SE cor., Sec. 11-17-12	Cmtd. 12½-in; drlg. 868 ft.
Walker and others' No. 1 Antrim, NW cor. SE Sec. 28-22-13	Drilled 4 ft. deeper; bailed dry; T.D. 3,021 ft; S.D.
Woodmansee and others' No. 1 Bollinger, SE cor. NE Sec. 9-22-11	Shut down waiting orders 3,532 ft.

CADDO PARISH

D. C. R. Oil Co.'s No. 1 Oden, NE cor. NW Sec. 20-19-14	Standing 700 ft. in oil, waiting on standard rig; T.D. 2,423 ft.
Lide and others' No. 1 Oden, SE cor. Sec. 21-19-14	Cored shale 2,400-10 ft; coring at 2,415 ft.
Fred McWilliams' No. 1 Oden, 1,650 ft. S, 330 ft. W, NE cor., Sec. 20-19-14	Location.
Humble Oil & Refining Co. and R. W. Norton's No. 1 Fortner, Sec. 32-21-16	Drlg. sandy lime 4,910 ft.
Fred McWilliams' No. 1 Oden, 1,650 ft. S, 330 ft. W, NE cor., Sec. 20-19-14	Rig up.
S. T. Onyett, trustee's No. 1 Dixon, SW cor. Sec. 10-19-14	Drlg. 600 ft.
I. N. Pharisa, trustee's No. 1 Oden, NE cor. SE NE Sec. 19-19-14	Rig up.
Haynes Bros., No. 1 Oden, NE cor. NW, Sec. 1919-14	Rig up.
Tide et als' No. 1 Hunter, 200 ft. S, 200 ft. E, NW cor., Sec. 22-19-14	Location.
Ray-Davis Drlg. Co.'s No. 2 Hunter, 330 ft. N, 330 ft. E, SW cor., Sec. 9-19-14	Rig up.
Simplex Oil Co.'s No. 1 Dickson, 660 ft. N. and E. C. Sec. 33-20-14	Cmtd. 6-in. 2,459 ft; bailing to test; T.D. 2,468 ft.
A. H. Tarver's No. 1 Glassell & Dickson, 300 ft. N, 300 ft. E, SW cor., Sec. 31-20-14	Spudded July 18; cmtd. 10-in. 60 ft; drlg Nacatoch sand 850 ft.
Woodley Pet. Co.'s No. 4-A Knight, 22,991 ft. E and 1,273 ft. N, SW cor., Sec. 35-16-12	Cmtd. 8-in. 787 ft; drlg. 1,400 ft.
Woodley Pet Co.'s No. 1-B Knight, Sec. 11-15-12	Arranging to deepen; total depth 1,936 ft.

CATAHOULA PARISH

Lochnager Petroleum Co.'s No. 1 Taliaferro, 572 ft. E 396 ft. S C Sec. 26-9-6	Shut down 900 ft.

CLAIBORNE PARISH

Nesbit et als' No. 1 Mosley, 330 ft. S, 330 ft. E, NW cor., Sec. 29-20-5	Derrick; formerly listed as O. G. Collins et als'.
El Dorado Chief Oil Co.'s No. 1 Baker, SE cor. SE SW Sec. 26-20-7	Shut down 3,404 ft.
El Dorado Chief Oil Co.'s No. 1 Dance, C SW NE, Sec. 27-20-7	Spudded July 17; cmtd. 10-in. 120 ft; drlg. 1,100 ft.
Southern Crude Oil Purchasing Co.'s No. 1 Christian, NE cor. NW SW Sec. 22-23-6	Drlg. shale 2,646 ft.

DESOTO PARISH

P. J. Becker, trustee's No. 1 Tull, SW cor. NE NE Sec. 22-12-15	Shut down 1,805 ft.
Benedum & Trees Oil Co.'s No. 2 State, 1,700 ft. S and 1,350 ft. W NE cor. Sec. 22-14-12	Drlg. lime 3,245 ft.
Lide & Ford's No. 1 Nabors, SW cor. SE SW Sec. 32-12-11	Plugged back to 1,100 ft; reset 6-in. and packer; bailing to test 925 ft; T.D. 1,250 ft.
Longstreet Syndicate's No. 1 Ramsey, NE cor. SW NE Sec. 33-13-16	Changing to heavy rig and arranging to sidetrack; T.D. 2,802 ft.
Fair et als' No. 1 Hamilton, 500 ft. N, 300 ft. W, SE cor. SE SE, Sec. 1-12-13	Top Nacatoch 916 ft; drlg. 1,125 ft.
Magnolia Petroleum Co.'s No. 1 Anna Mason, 990 ft. S and 330 ft. E NW cor. SW Sec. 27-12-11	Location.
Magnolia Petroleum Co.'s No. 2 W. H. Mason, 330 ft. N and W C, Sec. 28-12-11	Drlg. lime 2,490 ft.
R. O. Roy's No. 1 Rogers, Sec. 13-13-14	Drlg. 2,060 ft.

FRANKLIN PARISH

Davis and others' No. 1 Moore, 600 ft. W and 200 ft. S NE cor. Sec. 12-11-6	Shut down 1,430 ft.

JACKSON PARISH

George O. Baird's No. 1 Tremont, SE cor. NW SE Sec. 24-16-1w	Drlg. sandy lime 3,212 ft.

LASALLE PARISH

Tunica Pet. Co.'s No. 48 L. & A., 100 ft. N, 100 ft. E, SW cor. NW, Sec. 16-7-2e	Cmtd. 6-in. 803 ft.
Tunica Pet. Co.'s No. 49 L. & A., 600 ft. S, 300 ft. W, NE cor., Sec. 17-7-2e	Location.

LINCOLN PARISH

V. E. Shaw et als' No. 1 Voss, SE cor., Sec. 1-20-3	T.D. 2,774 ft; S.D.

MOREHOUSE PARISH

J. P. White's No. 1 Chess-Wymond, Sec. 32-19-6	Old well drilling deeper; drill stem test 2,608-16 ft; dry; drilling deeper.
Rainbow Oil Co.'s No. 1 Louisville Cooperage Co., 990 ft. S and E NW cor. NE Sec. 33-22-8	Derrick.
J. P. White's No. 1 Chess-Wymond, Section 32-19-6	Old well abd. as dry hole; arranging to deepen; T.D. 2,570 ft.

NATCHITOCHES PARISH

S. D. McDaniel's No. 2 Clark & Morse, 800 ft. E and 350 ft. N C Sec. 23-5-6	Tested 1,000,000 ft. gas and salt water 8 ft.; shut down for orders, total depth 2,536 ft.
Robeline Oil & Gas Co.'s No. 1, NE SW Sec. 7-8-9	Drill stem stuck waiting orders; claim show of gas, total depth 3,230 ft.

OUACHITA PARISH

Haynes Oil Co.'s No. 1 Dixie Land Co., 957 ft. N, 3,960 ft. W, SE cor., Sec. 17, in H. R. 54-17-3, Sec. 17-17-3	Location.
Ouachita Natural Gas Co.'s No. 2-B D'Arbonne, SE cor. Sec. 35-19-2e	Shut down 3,349 ft.; well under water.
Farish & Russell's No. 1 School fee, NE Sec. 16-16-4	Drlg. hard lime 4,085 ft.

RED RIVER PARISH

Benedum & Trees Oil Co.'s No. 1 FranklinRealty Co., 350 ft. E, 350 ft. S, NW cor., Sec. 29-11-9	Cmtd. 12½-in. 345 ft; drlg. 1,160 ft.
Eylers Oil Co.'s No. 1 Chaffraix, NE cor. NE SW Sec. 39-12-10	Cmtng. 6-in; T.D. 2,515 ft.
D. H. Riddick's No. 1 Johnson, 500 ft. N, 500 ft. W, SE cor., Sec. 17-12-10	Location.

RICHLAND PARISH

Austin & McDonald's No. 1 Millsaps, 660 ft. N and 1,980 ft. E SW cor. NW Sec. 17-17-6	Tested 200,000 ft. gas; waiting orders; T.D. 2,510 ft.
Austin & McDonald's No. 2 Millsaps, SW cor. Sec. 17-17-6	Waiting orders; T.D. 2,697 ft.
Austin & McDonald's No. 3 Millsaps, 1,980 ft. S and 660 ft. E NW cor. Sec. 16-17-6	Location.
Austin & McDonald's No. 4 Millsaps, NW cor. Sec. 16-17-6	Location.
Palmer Corp.'s No. 2 Miles, 723 ft. E, 660 ft. S, NW cor. NE, Sec. 12-17-6	Rigging up.

SABINE PARISH

R. L. Gay, trustee's No. 4 Bowman-Hicks, SE cor. NW SE, Sec. 14-7-14	Cmtd. 12½-in. 68 ft; drlg. 250 ft.
R. L. Gay, trustee's No. 1 Long-Bell Lbr. Co., NE cor. NW NW Sec. 26-8-14	Drlg. 2,350 ft.
R. L. Gay, trustee's No. 2 Sabine Lumber Co., Sec. 23-7-14	Showed oil; bailed dry 2,234 ft; drlg. 2,438 ft.
A. H. Tarver's No. 1 Long-Bell Lumber Co., NW cor. SW NW Sec. 29-8-13	Small show gas and mud; waiting orders; T.D. 3,535 ft.

UNION PARISH

J. E. Cammattee and others' No. 2 Tugwell, NE cor. NE NW Sec. 21-22-1e	S.D. 2,350 ft.
H. C. McDonald's No. 2 U. S., NW cor. SW NE Sec. 18-22-1e	Shut down 1,500 ft.
Sundby and others' No. 1 Security Trust, SE cor. Sec. 6-23-1e	Shut down waiting orders; total depth 2,300 ft.

WEST CARROLL PARISH

W. F. Hyde, trustee's No. 1 Chickasaw Imp. Co., NE cor. NE, Sec. 24-23-11	Derrick.

ARKANSAS

CALHOUN COUNTY

Phillips Pet. Co.'s No. 1 Freeman-Smith Lumber Co., 300 ft. S, 300 ft. W, NE cor. SW NW, Sec. 25-16-13	Derrick.
Ohio Oil Co.'s No. 1 Stout Lumber Co., NW cor. SW Sec. 31-14-13	Coring 2,570 ft.

CLARK COUNTY

Wm. Henry, trustee's No. 1 Clark, Sec. 34-9-21	Shut down 1,300 ft.

COLUMBIA COUNTY

Arpeco Syndicate's No. 1 Dennis, Sec. 11-20-23	Drill stem test red sandy shale 3,555 ft; dry; drlg. red beds 3,685 ft.
T. R. Brown, trustee's No. 1 Spencer, Sec. 18-18-22	Top Nacatoch 1,864 ft; drlg. sandy lime 1,972 ft.
Helena Oil & Gas Co.'s No. 1 Pickler, Sec. 19-19-22	Shut down 2,762 ft.

FAULKNER COUNTY

Gold Creek Oil & Gas Co.'s No. 1 Stermer, Sec. 17-4-12	Cemented 6-in. 3,800 ft.

GRANT COUNTY

Jones & Watkins' No. 1 Meek, Sec. 5-4-11	Shut down 1,400 ft.

LINCOLN COUNTY

Pine Prairie Oil & Gas Co.'s No. 1 Carter	Shut down 2,176 ft.

LITTLE RIVER COUNTY

Grotte and others' No. 1 Allen, Sec. 31-12-31	Shut down 2,941 ft.

LOGAN COUNTY

Arkansas Natural Gas Corp.'s No. 1 Hanna, Sec. 26-7-23	C.O. under 8¼-in. csg; T.D. 3,000 ft.

MADISON COUNTY

Independent Oil & Gas Co.'s No. 1 Banks & Teague, Sec. 6-16-27	Plugged back to 460 ft; shot formation; estimated 3,500,000 ft. gas 460-65 ft; T.D. 2,500 ft.

OUACHITA COUNTY

Copenhaven and others' No. 1 Warnick, Sec. 2-15-17	Derrick.
Flaucher and others' No. 1 Buck, Sec. 7-15-17	Shut down 2,465 ft.
Lohman and others' No. 1 Fogle, Sec. 15-14-16	Shut down 1,540 ft.
Phillips Petroleum Co. and others' No. 1 Eagle Mills, Sec. 11-12-16	Drlg. 2,928 ft.
Sundby and others' No. 1 Farris, SW cor. NW SE Sec. 27-15-15	Stdzng. 100 ft. in fluid; 22 ft. broken sand; W.O.S.R; T.D. 2,093 ft.
Timberlake and others' No. 1 Wright, Sec. 25-14-18	Shut down waiting orders 2,907 ft.
Wesson and others' No. 1 Booth, Sec. 12-15-19	Shut down 2,202 ft.

UNION COUNTY

Sam Arrendale's No. 1 Gallagher & Nelson, 200 ft. N and W SE cor. Lot 5, Sec. 18-18-17	Drlg. 1,856 ft.
W. M. Coates, trustee's No. 1 McDuffie, Sec. 32-19-17	Drill stem test 3,945-51 ft; dry; coring 3,955 ft.
O. W. Estes' No. 1 Ramsey, NW cor. NW SW Sec. 34-17-14	Derrick.
E. L. Foster and others' No. 1 Murphy Land Co., Sec. 22-17-17	Shut down 1,400 ft.
Ohio Oil Co.'s No. 1, Acct. 2, Stout Lbr. Co., 330 ft. S, 330 ft. W, NE cor. NE NW, Sec. 30-16-13	Rig up.
Root Refineries, Inc.'s No. 1 Oliver, NW cor. SE NW, Sec. 18-17-13	Top red beds 3,015 ft; coring 3,022 ft.
McDonald Brothers' No. 1 Mayfield, Sec. 29-19-15	Shut down 2,210 ft.
Ohio Oil Co.'s No. 1 Stout Lbr. Co. Acct. 2, 330 ft. S, 330 ft. W, NE cor. NW, Sec. 30-16-13	Spudded July 20; cmtd. 10-in. at 261 ft.
Stark and others' No. 1 Ainsworth, NE cor. NW NE Sec. 8-19-16	Derrick.
T. J. Woodley's No. 1 First National Bank, NW cor. Sec. 34-19-18	Derrick.

WASHINGTON COUNTY

C. H. Willoughby's No. 1 Jones, Sec. 34-16-30	Cemented 6-in. 1,330 ft.; shut down 1,342 ft.
Lincoln Leaseholding Syndicate's No. 1 Lincoln, Sec. 30-15-32	S.D. 1,040 ft; repairs.

WHITE COUNTY

Letona Syndicate's No. 1 Letona, SE cor. NW SW Sec. 35-9-8	Cemented 6⅝-in. 2,975 ft.

EAST TEXAS

BOWIE COUNTY

Hooks Oil & Gas Co.'s No. 1 Lee Roseberry, L. T. King Sur.	Temp. abandoned, total depth 3,086 ft.

CAMP COUNTY

Rogers and others' No. 1 Enfelt, R. M. Montgomery Sur.	Tested dry at 1,870 ft.; shut down 1,920 ft.

RED RIVER COUNTY

D. M. Buffington's No. 1 Hossier, E. Hughhart Sur.	Claim show of oil and gas; shut down 1,893 ft.
Shad Harper's No. 1 W. R. Garland, J. Wagley Sur.	Shut down 1,862 ft.
Johnson Petroleum Co.'s No. 2 Randolph Edward Dean Sur.	Shut down 1,440 ft.

SHELBY COUNTY

Chapperall Oil Co.'s No. 2 Holt, Matthew Moore Sur.	Shut down for orders 3,004 ft.
Gulf Refining Co.'s No. 1 Carraway, J. H. Patterson Sur.	Drlg hard lime and streaks blue shale 5,325 ft.

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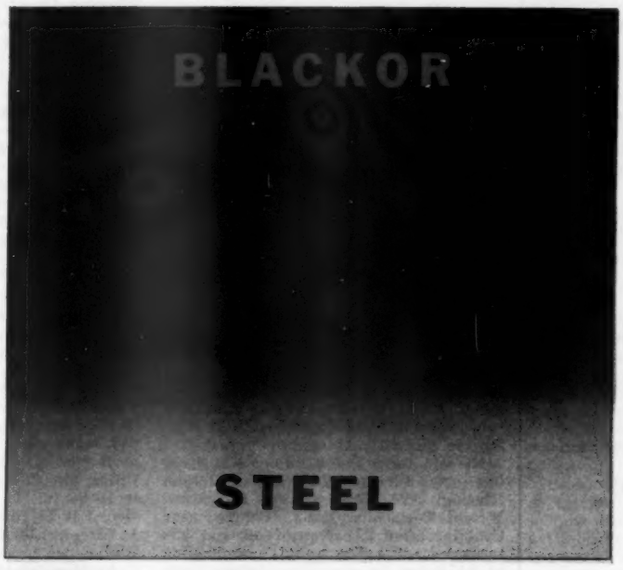

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MISSISSIPPI
ALCORN COUNTY
Alcorn Petroleum Co.'s No. 1 Matthews, SE cor., Sec. 14-2s-7e ..... Resumed drlg; made 153 ft; S.D. for new cable; T.D. 2,135 ft.
CHICKASAW COUNTY
Hightower & Golson's No. 1 Flemming, NE cor. Sec. 20-13-3 ..... Shut down 1,100 ft.
CLAIBORNE COUNTY
Ben W. White's No. 1 Shannon, NE cor. Sec. 36-10-4 ..... Fish. for drill stem; T.D. 2,004 ft.
HINDS COUNTY
Harry Gerson's No. 1 Edward House, Blk. 16, West Jackson Subdivision City of Jackson in Twp. 5n, Range 1e ..... Rig up.
Oscar Brown's No. 1 Riverside (formerly Hennessee and others), SE cor. SE SW Sec. 23-16-5 ..... Set 12½-in. 30 ft.; shut down 1,050 ft.
Mrs. Reeder and others' No. 1 State, SE cor. NW NW Sec. 25-6-1e ..... Shut down 2,895 ft.
HUMPHREYS COUNTY
E. C. Steele and others' No. 1 C. B. Box, SE cor. SE NE, Sec. 35-14-4w ..... Set 12½-in. 60 ft.; shut down.
LAUDERDALE COUNTY
Lauderdale Oil & Gas Co.'s No. 1 Lackey, 990 ft. S and E NW cor. NE Sec. 33-8-18 ..... Selma chalk 1,305 ft.
Meridian Oil & Gas Co.'s No. 1 Hauser, Sec. 33-8-18 .... Drlg. sand 1,683 ft.
J. R. Smith Oil Co.'s No. 1 C. F. Craig, Sec. 2-6-14 ..... Derrick.
MONROE COUNTY
Amory Development Co.'s No. 1 Bourland, Sec. 2-13-19 .. U.R. 5 3-16-in. csg. 2,580 ft.
Amory Petroleum Co.'s No. 1 Hall, Sec. 8-13-19 ..... Setting liner with packer to test sand at 2,387 ft; T.D. 3,045 ft.
Arkansas Natural Gas Corp.'s No. 1 Rye ..... Drlg. hard sandy lime 3,444 ft.
Park Bowser and others' No. 1 Cowart, second hole, Sec. 2-12-19 ..... Shut down 30 ft.
WARREN COUNTY
El Dorado Oil Co.'s No. 1 Dornbush, Sec. 8-18-5 ..... Cored sand showing small amount gas 1,224-26 ft; ratholing 1,300 ft.
YALOBUSHA COUNTY
Philp Brothers' No. 1 James, Sec. 20-11-5 ..... Drlg. 2,755 ft.
TENNESSEE
DECATUR COUNTY
Standard Oil Co. of Louisiana's No. 1 Wyatt ..... Drlg gray lime 1,243 ft; 200 ft. wtr. in hole from soft green strata at 1,212-15 ft.
Chester County Oil Co.'s No. 1 Montgomery ..... Cemented 6-in. 1,040 ft.
ALABAMA
CHOCTAW COUNTY
Robinson & Greer's No. 1 Douglas Oil Co., 320 ft. N, C, Sec. 15-19-2 ..... Location.
LAMAR COUNTY
Briggs & Knapp's No. 1 Wefel, Sec. 25-12-14 ..... Drlg. shale 785 ft.

WILDCAT OPERATIONS IN SOUTHWEST TEXAS

(Continued from Page 54)

L. W. Conner and others' No. 1 William Weinaug ..... Abandoned dry.
Grayburg Oil Co.'s No. 2 Sophie Haensel ..... Dropped from reports.
A. G. Kifer's No. 1 B. B. Dix ..... Drlg. 1,265 ft.; showing gas.
Miller Brothers' No. 1 Gib Springs ..... Dropped from reports.
T. H. Poole's No. 1 C. Woehler, John King Survey ..... Dropped from reports.
Sinclair Oil & Gas Co.'s No. 1 Ed Tewes ..... Drlg. 1,200 ft.
L. W. Stieren's No. 1 S. H. Herman, Ragsdale Survey ... Standing 1,233 ft.
The Texas Company's No. 1 Dallas Wilson, Sur. Darst ... Swbng. 52½ bbls. hourly 2,608 ft.
W. J. Walton's No. 1 G. Nolte ..... Abandoned dry.
JIM HOGG COUNTY
Deep Rock Oil Co.'s No. 1 Kelsey ..... Rigging up.
KARNES COUNTY
L. B. Flowers' No. 1 R. L. Barnett, 4 mi. NE Karnes City. Derrick.
Hurador Oil Co.'s No. 1 W. E. Porter ..... Drlg. 2,160 ft.
Scott Townsend and others' No. 1 Ruckman ..... Standing 2,500 ft.
KERR COUNTY
McMan Oil & Gas Co.'s No. 2 Walter Schreiner ..... Abandoned.
L. R. Page and Associates' No. 1 Real ..... Drlg. 2,335 ft.
KIMBLE COUNTY
Carl L. Bryant's No. 1 C. E. Lambert ..... Drlg. 150 ft.
H. A. McLean & Jamison's No. 1 R. F. Cannon ..... Standing 995 ft.
J. B. Lindsay's No. 1 G. C. Anderson ..... Drlg. 785 ft.
KINNEY COUNTY
Lloyd Oil Co.'s No. 1 G. B. Moore, Survey 117 ..... Set csg. 1,653 ft.; total depth 1,675 ft.
LASALLE COUNTY
J. G. Nix's No. 1 Coleman, Survey 65 ..... Standardizing 500 ft.
MAVERICK COUNTY
Ryan Consolidated Petroleum Co.'s No. 2 Indio Ranch .... Drlg. 5,065 ft.
Rycade Oil Co.'s No. 3 Chittim ..... Drlg. 4,435 ft.
Rycade Oil Corp.'s No. 4 J. M. Chittim ..... Drlg. 3,755 ft.t
Rycade Oil Co.'s No. 4 Sullivan ..... Drlg. 4,070 ft.
Rycade Oil Corp.'s No. 5 Chittim ..... Clearing land for rig.
The Texas Company, 5 miles west Darling Switch ..... Moving in material.
MEDINA COUNTY
Pat Armstrong's No. 1 C. W. Butts ..... Derrick.
California-Medina's No. 1 Rothe ..... Drlg. 3,426 ft.
Donaldson Oil Co.'s No. 2 Adams ..... Dropped from reports.
Lynch and others' No. 1 Mott ..... Dropped from reports.
Rawdon-Hughes and others' No. 1 Bendele, Survey 593 .. Drlg. 815 ft.
Rawdon-Hughes and others' No. 1 A. L. Haegelin ..... Dropped from reports.
Rawdon-Hughes and others' No. 2 Bendele ..... Standing 937 ft.
Cecil Switzer's No. 1 Zerr ..... Dropped from reports.
Trapshooter Reilly Oil & Royalties Co.'s No. 1 Adams, L. Fritz Sur. ..... Location.
W. W. Woodworth's No. 1 Reinhart, J. Hall Survey ..... Dropped from reports.
MILAM COUNTY
J. M. Burkhead's No. 1 C. Welgham ..... Drlg. 1,690 ft.
E. L. Chapman's No. 1 E. G. Knight ..... Drlg. 400 ft.
E. L. Chapman's No. 1 J. M. Gilchrist ..... Abandoned.
H. E. Elliott and others' No. 1 J. C. Moore ..... Lost hole; abandoned.
Hill & Bonwell's No. 1 B. Booher, James Welch Survey .. Drlg. 2,007 ft.
Wilson and others' No. 1 Johnson & Stiles ..... Location.
Elbert Williams' No. 1 Tom Shigut ..... Shut down 2,000 ft.
Milam Oil & Gas Co., 4 miles southeast of Rosebud ..... Drlg. 600 ft.
J. W. Stiff's No. 1 M. Winston, J. Leal Sur. ..... Location.
A. H. Wray's No. 1 D. D. Fowler ..... Setting casing 302 ft.
McMULLEN COUNTY
Natt Holman's No. 1 Shiner, H. M. Brewer Survey ..... Standing 790 ft.
NUECES COUNTY
Nueces River Basin Dev. Co.'s No. 1 F. C. Allen ..... S.D. 3,780 ft. waiting for csg.
Pearson and others' No. 1 Bluntzer ..... Standing 3,507 ft.
R. & G. Corp.'s No. 1 Emily Wright Perkins ..... Standing 3,510 ft.
R. & G. Corp.'s No. 1 Roberts ..... Location.
R. & G. Corp.'s No. 1 Ragland ..... Standing 3,003 ft.
SAN PATRICIO COUNTY
Magnolia Petroleum Co.'s No. 1 C. Freeman, Sec. 57 .... Drlg. 450 ft.
Houston Gulf Gas Co.'s No. 3 Welder ..... Drlg. 4,380 ft.
STARR COUNTY
Smith & Adams' No. 1 Welch, Pedernal Sur. ..... Drlg. 200 ft.
Ohio Oil Co.'s No. 1 Bass, Por. 76, Blk. 71 ..... Drilling.
U. S. Oil & Gas Co.'s No. 1 Kelsey, Por. 74, Blk. 11 ..... Standing.
TRAVIS COUNTY
J. W. Allen's No. 1 McAngus, Westbrook Sur. ..... Location.
VICTORIA COUNTY
Humble Oil & Ref. Co.'s No. 3-A J. J. Welder ..... Drlg. 3,124 ft.; reported as wildcat in error; Nursery Field.
WEBB COUNTY
O. W. Killam's No. 6 Billings ..... Drlg. 2,141 ft.
G. S. Lumpkin's No. 1 H. Yeager, Por. 23-34-35 ..... Location.
Usher Carson's No. 2 D. Benavides, Sur. 1,613 ..... Standing 1,005 ft.
WILLIAMSON COUNTY
J. C. Hawkins, 1½ miles northwest discovery well ..... Location.
WILSON COUNTY
Grayburg Oil Co. ..... Moving in rig.
ZAPATA COUNTY
National Oil Co.'s No. 1 D. B. Adams ..... Standing 690 ft.
Buck & Coursey's No. 1 Garza, Blk. 47 ..... Drlg. 1,450 ft.
Buck & Coursey's No. 1 Trevino, Sur. 1 ..... Drlg. 325 ft.
ZAVALA COUNTY
Fritex Oil Co.'s No. 1 Clay Burns ..... Drlg. 780 ft.
Fritex Oil Co.'s No. 4 West ..... Drlg. 795 ft.
Fritex Oil Co.'s No. 1 Childress ..... Drlg. 1,095 ft.

MICHIGAN FIELDS

(Continued from Page 62)

kegon Township, the Globe Oil Co.'s No. 3 Andrew Luinstra, NW NE, Section 7-10-16.

Scattered Wildcats

The Sherman Oil & Gas Co.'s No. 1 Joseph Hoppa, SW SW, Section 22-13-13, Sherman Township, Newaygo County, struck bottom salt at 2,872 feet, has been abandoned.

A show of gas at about 3,200 feet started drillers running casing in Uhl & Sarver's No. 1 David E. Uhl, NW SE, Section 20-13-12, Everett Township. A number of wells are being started on recent new locations in Newaygo County.

Shell Petroleum Corp. has started drilling a new Newaygo County wildcat, NW cor. NW NW, Section 36-13-13, Sherman Township.

The White River Oil Corp. has located its third test in the vicinity of Montague, about 15 miles north of Muskegon, No. 1 Collatz-Neuerdorff, SE NW, Section 29-12-17, Montague Township.

Niagara limestone was topped at 4,160 feet in the Wright Oil Co.'s No. 1 Joseph Kluting, SW NW, Section 10-8n-13w, Wright Township, Ottawa County, near Conklin, after 271 feet of oil and gas saturated salt. The well is now drilling at 4,178 feet as one of the deepest tests ever drilled in Michigan.

Royal R. Miller's No. 1 Paul Sako wildcat near Agnew, NE NW, Section 27-7-16, Grand Haven Township, is caving where drillers are cleaning out after a show of oil and gas in the Trenton limestone. The bottom of the hole is 3,860 feet.

Another dry hole was added to the record of Kent County, western Michigan, when R. W. Gallagher's No. 1 Pennington, SE SW, Section 4-8-10, Cannon Township, struck bottom salt water in the Dundee and was abandoned at 2,842 feet.

Two Oceana County wildcats, one near Hesperia and the other near New Era, were reported to have had shows of oil and gas in the Dundee and in a stray lime formation.

Sankey Oil & Gas Co.'s No. 1 Frank Darlington, SW SE, Section 9-14-15, Newfield Township, topped the Dundee at 2,680 feet and ran casing at 2,682 feet into limestone which smelled of oil and gas. Oceana Oil Corp.'s No. 1 Vanderwaal, SW NE, Section 35-14-17, Shelby Township, just north of New Era, had a show of oil in a stray limestone above the Traverse.

Southwestern Michigan

The first of a half dozen or more wildcats drilling to test the southwestern corner of Michigan in the Traverse, Dundee, Monroe, Niagara and Trenton formations was dry in the Trenton at 2,029 feet. This was Blair and Miller's No. 1 Frank Knowlton, SW SW, Section 2-8s-16w, Milton Township, Cass County, near the Indiana-Michigan state line.

Operators were more encouraged with indications of commercial gas in the lower Traverse in a Van Buren County wildcat being drilled by the Bi-County Fuel & Gas Co., north of Watervliet, SE NE, Section 34-2s-17w, Covert Township.

The Blatchford Oil & Gas Co.'s No. 1 Blatchford, NW SW, Section 11-3s-17w, Watervliet Township, Berrien County, has gas in the lower Traverse.

The first recent Allegany County wildcat is drilling at 1,800 feet and in the Monroe formation after being dry in the Traverse and Dundee formations. It is C. F. Kimmell and G. H. Schrack's test on the F. L. Hamilton lease, NE SW, Section 5-1n-14w.

Harry P. Manion and Dan B. Hutchinson will locate a test on the John Tobin farm in Section 15, Allegany Township, Allegany County, a little more than a mile north of Allegany City.

That Allegany Township is being considered is indicated by core testing there by the Pure Oil Co. and in leasing by the Shell Petroleum Corp. in Valley Township, the Johnson Oil Refining Co. in Trowbridge Township and the Reed Oil Co. in several townships.

New regulations for the oil and gas operations in Michigan were explained to operators at Muskegon at a meeting by Floyd R. Frye, new supervisor of oil and gas conservation. One provision is that not more than 1,800 feet of gas shall be used to raise a barrel of oil.

New 1,000 Bbl. Well

Drillers and officials of the Buckeye Oil & Gas Co., of Cleveland, Ohio, were surprised Sunday when their No. 1 Gerritt Vanlee, on the west edge of the proven Muskegon Field, in Laketon Township, came in for an initial daily flow of more than 1,000 bbls. Dundee pay sands were topped at 2,054 feet, and at 3 feet in the well flowed 500 bbls., filling two 250-bbl. field storage tanks in 10 hours. It is located NW SW, Section 1-10-17, one location south of No. 1 Vanlee, which made only 40 bbls. initial.

Another 400-bbl. initial daily producer was brought in Saturday for Nelson & Witt, Inc., in No. 3 Ralph Andree, NW SE, Section 12-10-17, Laketon Township. A third well, Charles W. Marsha and others No. 6 Ira R. Hallock, NW NW, Section 7-10-16, Muskegon, Township also was drilled into the Dundee, but failed to flow at 2,022 to 2,026 feet. It will be swabbed and maybe drilled to the Niagara as a deep test, as it was started with large drive pipe, anticipating deeper drilling than present pay sands in the Muskegon Field.

KANSAS FIELDS

(Continued from Page 116)

SW, Section 32-13-15w. The Texas Company's No. 1 Jacobs, SW cor. Section 31-12-15w, made a 60-bbl. well in sand at 2,983-3,007 feet.

Sedgwick County

Brnsdall Oil Co. has the rig up for No. 1 Parks, SW cor. SE, Section 13-25-1, Valley Center area. The Texas Company is erecting the rig for No. 1 Dixon, SE cor. SW, Section 13-25-1. Skelly Oil Co. moved the rig in for No. 1 Gracher, NE cor. NW, Section 11-26-2. Location has been made for No. 1 Myers, NW cor. NE, Section 11-26-2. Ramsey and others' No. 3 Mason, SE cor. NW SE SW, Section 15-26-2, on Lot 1, Block 7, Greenwich Townsite, is rigging up. John Rogers and others made location for No. 1 Johndro, SW cor. SE SW SW, Section 15-26-2, on Lot 16, Block 9, Greenwich Townsite.

Shell Petroleum Corp. has a rig up for No. 2 Community, NW cor. SE SW, Section 15-26-2, on Lot 17, Block 2, Greenwich Townsite. No. 3 Community, SE cor. NW SE SW, Section 15-26-2, on Lot 12, Block 8, Greenwich Townsite, is rigging up. The rig is being built for No. 2 Fischer, SE cor. NE SE, Section 15-26-2.

Skelly Oil Co. and Davis' No. 9 Wilson, SW cor. NE, Section 1-26-1w, Valley Center Pool, has been completed for 710 bbls. in sand at 3,357-65 feet. Kroder and others' No. 1 Harden, SW cor. NW SW, Section 20-26-1, has been abandoned at 1,140 feet. Producers Oil Co.'s No. 1 Jones, SW cor. NE SE, Section 31-26-2, is dry and abandoned at 3,640 feet.

Eastern Tank Car Stabilized at Dime

One Cent Advance in Tank Wagon and Service Station Gasoline Prices in Upper New York State. Tone Easy

By A. E. Mockler
New York Bureau, The Oil and Gas Journal

NEW YORK, July 29.—Stabilization of the tank car gasoline market at 10 cents per gallon and a 1 cent advance in tank wagon and service station gasoline prices in upper New York state featured the East Coast refinery markets situation. The general tone of the market is still easy, although a slightly better feeling has developed in gasoline as a result of the past week's changes.

An interesting development reported in the export field was the reported sale of a large cargo of high gravity gasoline to England, the sale being reported made in the open market and not under the export association auspices, as has been the case with practically all other sales during the past several months. In addition to this reported deal, a cargo of 400 endpoint gasoline was reported offering at the Gulf at a material concession from the established basis, indicating the general weakness prevailing in gasoline markets in the Southwest.

While it is still possible to shade the 10-cent quotation on U. S. Motor gasoline in the East, there are definite indications of a general firming up to the general market level. Selling pressure on California gasoline has lightened, and with respect to the reported low-priced sales of the Pacific Coast motor fuel in Ohio and Indiana markets, it is now said this business represents deliveries on old contracts, which in the light of recent market developments, have turned "sour" from the seller's standpoint. Regardless of this explanation, it is evident there is still considerable California gasoline offering in the East and markets contiguous to East Coast ports, and the California motor fuel gives every evidence of continuing as a major factor in the market situation for the remainder of the year and into 1930.

Tank Car Gasoline

With Standard Oil Co. of New Jersey back to a 10 cents basis, having reduced its quotation July 24, the market is now again on a uniform basis. The New Jersey company at the close of June took the lead in an advance in the tank car basis, advancing the market 1 cent, but got no support in its position from other refiners, who held at the 10 cents level.

Business in the bulk market continues heavy, with jobbers ordering forward shipments in a large way. While competition for this business is still sharp, it can be safely said that practically all of it is going through at the 10 cents figure. One large seller a few days ago received shipping instructions on several cars from a jobbing concern in Ohio, the order specifying the gasoline was to be invoiced at 9¾ cents f.o.b. East Coast or the deal cancelled. The seller immediately cancelled the order and wired the jobber he had better place his business elsewhere if he expected to have the gasoline arrive when needed. This is not an isolated instance, but reflects the better feeling now prevalent in market circles.

Action of Standard Oil Co. of New York in advancing its tank wagon and service station quotations 1 cent in upper New York State has also had a strengthening influence upon the tank car market here, narrowing the spread between tank car and tank wagon prices and bringing out a better open-market demand.

One large seller, now actively campaigning for both wholesale and retail business in the Eastern territory, is reported to have offered jobbers, in at least one instance, a spread of 7 cents under the tank wagon basis on gasoline. This is a considerably broader margin than any of the other large refiners or marketers are offering, and there is some uncertainty as to just how this competition is to be met. The general feeling appears to be in favor of letting the one seller get all of the business he can at the 7-cent spread, other sellers seeing no profit in gasoline marketing for them at such a wide margin to the distributor.

Premium gasoline sales are on the increase, and the outlook favors an increasing volume of high-test motor fuel business over the remainder of the year. Many independent marketing companies are now putting out premium anti-knock fuels under their own brand names, although most of them are using the premium fuels of the larger companies, backed up as they are with widespread advertising.

Tank Wagon Gasoline

The outstanding development of the week was an advance of 1 cent by Standard Oil Co. of New York in its tank wagon and service station prices throughout New York State, with the exception of the metropolitan area. Previously, the New York City price has been 2 cents above that prevailing in the remainder of the state but this differential is now narrowed down to 1 cent. Other marketers are following in the advance. The new prices are 16 cents tank wagon and 18 cents service station, not including the 2-cent tax.

There have been no changes in tank wagon schedules in other sections of the East Coast, although some interests had been inclined to look for a higher basis in the South Atlantic states. However, the drop of 1 cent in tank car markets by Standard of New Jersey is believed to preclude the possibility of any early advance in the tank wagon basis. General weakness in gasoline markets at refining points in all parts of the country is counted upon to hold down tank wagon and service station prices this summer.

While no official price changes in the retail basis have been made by any of the larger interests, the competitive situation with respect to retail sales is not as favorable as a few months ago. There has been quite a bit of shifting about of "allegiance" on the part of retail station operators and retail chains, and this has been accompanied by some cutting in prices at the pump. While this cutting has not necessarily taken the form of reductions in the posted price, station operators by concessions involving waiving of the state tax, "one gallon free with ten," etc., are going under the posted schedules in many instances.

Sales of gasoline throughout the territory are heavy, and are running substantially in excess of those for the corresponding period last year. While there is little doubt that East Coast markets will hang up a new record this year so far as consumption is concerned, the returns to some of the marketing groups will not be as good as earlier developments had indicated.

Territorial lines throughout the East appear to be a thing of the past, and marketing companies are now branching out wherever it appears likely advantageous distributing outlets may be opened up, regardless of what company or companies such expansion plans may affect.

Kerosene

Leading sellers continue to hold the market for water white in tank cars at 7¾ cents, with a fair amount of business going through at that figure. Jobbers are showing easy price views, and are bidding around 7½ to 7⅝ cents. Principal sellers are adhering to the 7¾ cents basis, however, and it is improbable this figure can be shaded except in a transaction involving an unusually large lot, or possibly with a small seller who may be temporarily overstocked. Volume is fair for this season, but demand is routine in tone, with distributors ordering forward stocks only as actually needed.

The tank wagon situation is without change so far as prices are concerned, marketers continuing to quote 15 cents. There is a better volume of business reported, and marketers are planning for a rather heavy movement throughout the summer.

Gas Oil

The situation in this division of the market is little changed from that of the past several weeks. Leading sellers are quoting recycled oil at 5¼ cents, in tank car lots, but report a limited demand, most of the business consisting of shipments on contract to large industrial consumers, such as the artificial gas companies.

Some sellers are quoting gas oil as low as 4¾ cents, and are getting a moderate jobbing inquiry at that figure. Stocks available for prompt shipment are fairly large, with the market tone soft. Straight-run gas oil is not offered in the open market, and commands a premium.

Charter Market

Demand for tankers has slackened off a little, but the offerings are still limited and rates high. Clean trans-Atlantic tonnage is reported available at 37 shillings, against the peak of 38 to 40 shillings reached a few weeks ago. Dirty tonnage for South America and the Gulf to North Atlantic is also a little easier.

Owners are still quoting $1 or better for clean tankers for movement from California to Atlantic Coast ports, but available tonnage is well booked up through August. It is indicated some vessels are available for September-October, and charterers are looking for a lower rate to prevail during those months.

There is a heavy movement of California gasoline eastward at present, with the large companies operating their tanker fleets at capacity.

Lubs

The market for cylinder oils has been rather flat throughout the week, and while no further price changes have materialized, the tone is still easy. Domestic buyers are operating in only a limited way, and the same is true of the export end. Buyers are bidding under quoted levels when coming in for supplies, and on all but bright stocks are able to obtain slight concessions in most instances, it is reported.

Refiners have eased off on their selling pressure, and are making some effort to arrive at a trading level and re-establish some degree of stability. The statistical position of the market for all cylinder oils is fairly good, the present chaos being due to the fact that a heavy spell of buying during the latter part of the second quarter carried prices up so precipitately the advance outran the fundamental strength in the lub oil situation.

Industrial lubs are moving in but routine volume, but this is a seasonal reaction incidental to midsummer slackness in manufacturing operations in the textile and other industries. Prices for red and pale oils are fairly well maintained.

Fuel Oil

The market is unchanged at $1.05 per barrel in bulk at terminals and $1.10 per barrel barged alongside within the harbor limits. Demand is active with contract withdrawals running ahead of 1928 totals in many instances.

Interest in the market this week centered in the contracting with North German Lloyd for fuel oil for the Bremen, the new "queen of the seas." The Standard Oil Co. of New Jersey landed this contract, which calls for 35,000 bbls. of fuel oil each time the vessel docks at New York. The bunker capacity of the Bremen is not quite large enough to refuel for a complete round trip from German ports. Because of this, the vessel will take on about 15,000 bbls. in Germany on each return voyage. The round trip rate of consumption is figured on by the company as between 45,000 and 50,000 bbls.

Announcement that the new Pan-American refinery at Aruba is now running 115,000 bbls. of Lago's Venezuelan production daily, and that capacity operation of 125,000 bbls. per day would be reached shortly, has brought about a better feeling in fuel oil trade circles. Previously, this crude had been shipped mainly to Atlantic Coast refineries for refining, and a large fuel oil production ensued. With the new Pan-American refinery in operation, this crude will be cracked, with a minimum out-turn of heavy fuel oil.

Diesel Oil

Volume in Diesel oil has been well maintained, and prices are steady at $2 to $2.10 per barrel in bulk at refineries, all sellers with the exception of one quoting at the inside price.

Refiners report that complete figures on their sales of Diesel oil for the first six months of 1929 show substantial gains over the corresponding period last year. Increases in sales totals during this period, on the average, have ranged from 35 to 45 per cent, according to company, and refiners are looking for this rate of gain over 1928 to be more than maintained over the balance of the current year. A fairly heavy volume of marine business is now on the books for the balance of 1929, and in addition, day-to-day business in the spot market is running into considerable totals.

Paraffin Wax

While the volume of actual business in spot paraffin wax remains light, there has been a definite improvement in the market undertone this week, and traders believe the turn is about due. There is a good amount of inquiry for forward positions at current prices, but refiners are mainly offering spot at these figures, and are not willing to take on futures at current low levels.

An indication of the trend of thought among traders is seen in the fact that operators in a few instances are taking a long position in the market, indicating an early upturn in values is looked for. Thus far, the amount of speculative buying of this character has been small, but there is nevertheless a definite trend in that direction.

While prices are unchanged, quotations are quite irregular. Some refiners are quoting a quarter to a half over the listed figures, while in a few instances refiners with large stocks on hand are shading the market in an effort to lighten the load.

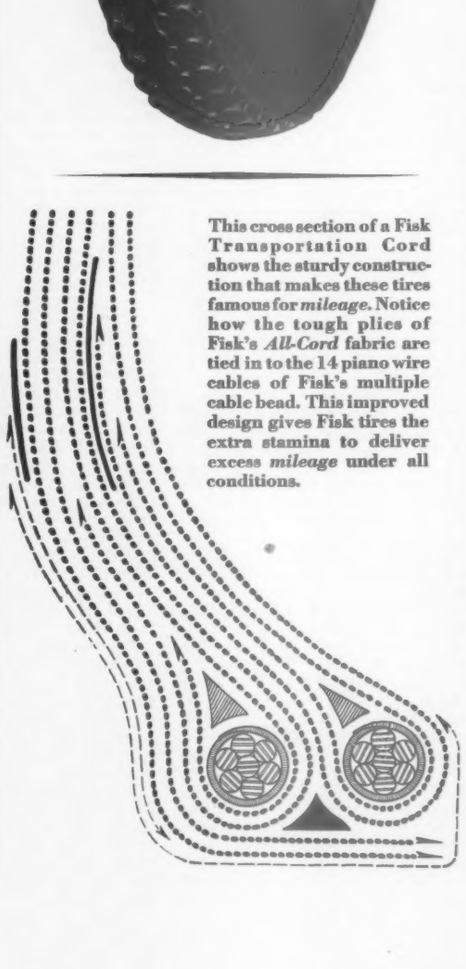
Export operators are looking for paraffin, particularly fully refined grades, over the balance of the year at current quotations, but are not finding many refiners willing to book ahead on this basis. The amount of spot buying for export is rather small.

Petrolatum

Conditions in the petrolatum market have shown very little change. There has been a slight pick-up in the volume of spot inquiry on the white grades, and the market appears to have steadied at

(Continued on Page 131)

mileage



This cross section of a Fisk Transportation Cord shows the sturdy construction that makes these tires famous for *mileage*. Notice how the tough plies of Fisk's *All-Cord* fabric are tied in to the 14 piano wire cables of Fisk's multiple cable bead. This improved design gives Fisk tires the extra stamina to deliver excess *mileage* under all conditions.

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FISK

Practical Suggestions in Refining

By W. T. Ziegenhain

Discarded Tires Solve Problem for This Cleaning Crew

The three men shown in the picture here solved their problem of blistered feet during the coking out operation by the use of old automobile tires. They are members of the clean-out crew at the Neodesha plant of the Standard Oil Co. of Kansas and they say they have tried everything they could think of to slip over their shoes and have purchased special shoes, but none has served as well as the pieces of old tires.

As may be seen in the picture, the tire is cut in lengths to just cover the heel and sole of the shoes. The bead of the

tire is removed and the front of the tire section is cut back to fit close to the shoe. Two wire laces are permanently fastened into the tire, one over the toe and the other around the heel. The old tires having a heavy tread are preferred to those which have been badly worn. The life of the shoe, if made from a tire having a fair tread, is usually about three weeks if used every day. Sometimes leather coverings, wooden shoes and asbestos shoes will give long service but are not as comfortable. They say leather is too expensive and not as resistant to heat. Asbestos shoes gave good service for wear, but they retained the heat and caused blisters. Wooden shoes are clumsy and soon become slippery. If someone has found a better solution for their problem, these gentlemen would like to know about it.

Swinging Platforms Promote Safety and Are Very Practical

For convenience, and to promote safety, the Transcontinental Oil Co. at Bristow has designed and placed in use some very durable and easily operated loading rack platforms. The general appearance may be gained from the accompanying picture. Two 2-inch angle irons support the platform. They extend about 1 foot beyond the floor of the rack and are drilled on the ends to take a half-inch bolt. These angle irons are welded to the steel frame of the rack so the one face of the iron is flat against the horizontal beam supporting the rack while the other face is on the outside. When the platform is swung from the frame it strikes against the horizontal face of the angle iron on each side and provides a strong support and the chance of a side thrust is eliminated.

The swinging portion of the platform is made of 1½-inch angle iron, shaped into an open rectangle. The width of this portion is such as to fit between the two supports. The angle iron is so bent and welded as to allow short 2-inch board to be set down into the frame. These boards are bolted in place and are

(Continued on Page 131)

EFFECT OF VELOCITY OF FLOW ON FORMATION OF COKE GIVEN STUDY

A correlation of some interesting facts regarding the theories of cracking has been made by A. E. Dunstan and R. Pitkethly of the Anglo-Persian Oil Co., as recently reported by the American Chemical Society. The work undertaken was applied to Persian crudes and oil products but the same conclusions would likely hold for most any petroleum oils. Similar investigations on American crudes have further substantiated some of the conclusions.

The problem of minimizing the coke formation is first discussed, in which the value of maintaining a high velocity of flow through the cracking zone and the cooling of the heated oil after cracking is in progress, are two important factors in minimizing coke formation. These have been recognized more recently and several installations of cracking equipment have been made in which these have been given every consideration. The favorable results have been sufficient to substantiate the theory.

An experimental unit having a daily capacity of 100 gallons was used to study the effect of velocity on coke formation and the diagram of the unit is shown in Figure 1. The plant consisted of seven 1-inch tubes 6 feet long connected in series with return bends to form a continuous coil of drawn steel. The outlet end of the coil was connected to water-jacketed tubes of the same size and material to form a cooler in two sections. The outlet of the coil was also connected to one end of the cylinder of a surge pump, having a variable stroke and a variable speed. The inlet end of the coil was connected to the other end of the surge pump cylinder. Each of the tubes forming the coil was heated electrically and, independently controlled by rheostats so that heat could be applied under control to any section of the plant.

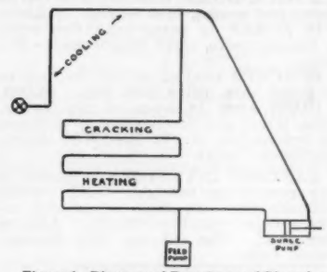

Figure 1—Diagram of Experimental Plant for Cracking by Application of High Velocity to Oil Stream

Heating of Oil

As the oil starts through the cracking coil it is heated rapidly to a temperature below that of active decomposition, say at 716 degrees Fahrenheit, and in its further course is gradually and uniformly raised to 842 degrees Fahrenheit, or a temperature at which the oil actively decomposes. The application of heat may slowly continue, but in such a way the film temperature remains at a minimum under the conditions of turbulence produced by the surge pump. Thereafter the oil temperature is gradually reduced as decomposition proceeds, and the vapor pressure rises, in order to obtain the maximum yield of light products without substantial vaporization. The treated oil was rapidly cooled while still under pressure or directly flashed into a dephlegmator. Thus the time taken for the oil to pass through the apparatus is only a few minutes.

Conditions under which the experiment was carried on was varied in the different runs but as examples the results of several runs are given. A Persian gas oil was run to yield 25 per cent gasoline with an endpoint below 392 degrees Fahrenheit. A Persian long resid representing 65 per cent of the crude yielded slightly less than 40 per cent of gasoline of the same distillation range. In each case a fuel oil was made which contained no free carbon. The feed pump forced the oil into the plant at a rate of about 4 gallons per hour, being thus at the rate of from one-thirtieth to one-twentieth foot per second, while the surge pump worked at 120 revolutions per minute, giving the column of oil a velocity of 12 feet per second, alternately in opposite direction. After passing through the coil, the cracked oil was flashed by an automatic relief valve into an evaporator at the base of a column yielding a light overhead of a recycled gas oil and a fuel oil residue which was free from coke and had a viscosity of 700 seconds Redwood at 100 degrees Fahrenheit. Throughout this operation a pressure of 600 pounds or more was used.

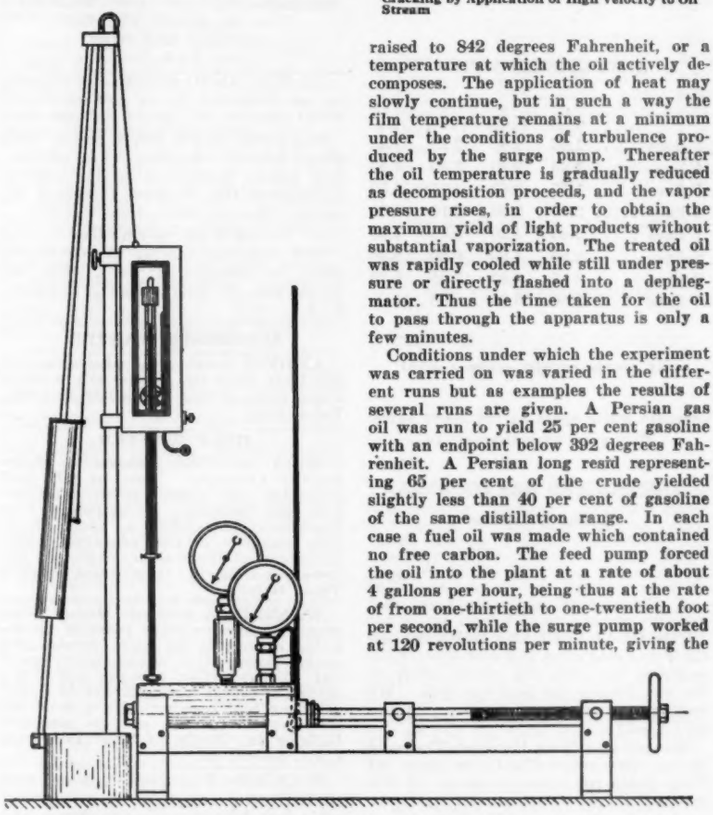

Figure 2—Apparatus for Studying Effects of Cracking

Apparatus for Studying Cracking

A further study of the reactions and results of cracking are being made on an apparatus of the general design as shown in Figure 2 here. The authors have found this apparatus to be flexible enough in operation to be brought into general use for similar studies.

It consists essentially of a horizontal steel cylinder filled with mercury and fitted with a plunger. The plunger rests on two bearings, the outer one being threaded to engage in the threaded section of the plunger stem, and by turning this stem the pressure may be adjusted to any within the limits of the apparatus. A gland prevents leakage where the plunger enters the cylinder. Through the walls of the cylinder are holes into which are fitted an open mercury manometer and low pressure and high pressure gauges. These are brought into use or cut out with needle valves. At the end farthest from the plunger a fourth hole is fitted with a gland into which a specially made clear silica tube 85 centimeters long and 4 millimeter inside diameter is fixed. The silica tube is closed at the top and has a shoulder at the open bottom end to hold it in position in the gland and is capable of working up to a pressure of 1,000 pounds per square inch. The upper or closed end of the tube is enclosed in an oven of special design, being heavily insulated on four sides while double glass windows with an air space between for the front and back. The interior of the

(Continued on Page 131)

Recent Patents

1,714,812. Apparatus for Distilling Mineral Oil. Arthur E. Pew, Jr., Bryn Mawr, Henry Thomas, Ridley Park, Pa., assignors to Sun Oil Co. Philadelphia, Pa., a corporation of New Jersey. Filed May 29, 1926. Serial No. 112,444. 10 Claims. (Cl. 196—119.)

7. In an apparatus for distilling oil, the combination with a number of oil vaporizers each comprising an oil vaporizing chamber and a mercury vapor condensing chambzer in heat exchange relation, and pipe connections between adjacent oil vaporizing chambers to allow oil to flow through the vaporizers successively, of a mercury boiler, means providing passage for mercury vapor from the boiler to the mercury chambers of the several vaporizers, and means providing independent mercury condensate return passages from the mercury vapor chambers of the several vaporizers, the last named passages communicating with the boiler, valves independently controlling the rate of flow of mercury vapor into the mercury chambers of the respective vaporizers, whereby the pressure and temperature of condensation in the mercury chamber of each vaporizer may be independently regulated, and means interposed in the last named passages to allow absolute pressures of mercury vapor in the several mercury vapor chambers substantially different from each other and below the pressure of mercury vapor in the boiler.

USE FILTER AID TO SEPARATE WAX

1,718,672. Art of Manufacturing Paraffin. Clarence A. Ward, Linden, N. J., assignor to Standard Oil Development Co., a corporation of Delaware. Filed November 20, 1925. Serial No. 70,414. Three claims. (Cl. 196—17.)

1. The process of treating paraffin slop which comprises chilling the paraffin slop, pressing the chilled slop in the presence of a filter aid to obtain a pressed oil and a difficultly sweatable slack-wax and distilling said difficultly sweatable slack-wax under conditions of substantial cracking to produce a distillate of sweatable slack-wax.

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Chicago, Illinois.

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5 WKM set shoe combination with wood gas plugs.
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WANTED — Bookkeeper-stenographer, must be competent and thoroughly familiar with oil producing business. Permanent position with chance for advancement. P. O. Box 683, Fort Worth, Texas.

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30,000 ACRE lease in Harding Co., New Mex. Will sell or make drilling contract. Have Geologist's report. Plenty of structure in sight. Also for sale or lease. 160 acres Grey Co., Texas. 1½ miles from big wells at LaFores. W. H. Woodlief, 728 N. Fillmore St., Amarillo, Texas.

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PRODUCTION BUYERS settled and paying properties, 25 bbls. up. Only first class producing leases handled in shallow oil district of Callahan, Shackelford, Brown, Stevens counties. Also well located acreage within trends for shallow drilling. W. M. Breuer, Box 305, Cisco, Texas.

WICHITA FALLS, Texas, district is most economical field in which to operate. Based on recovery and low cost of exploration. Our record of discovery oil proves worthwhileness of your investigating blocks we are now drilling with view of taking play with us either by buying offset acreage, interest in one wildcat or playing five well spread. H. B. Dudley, 704 Hamilton Bldg., Wichita Falls, Texas.

S.E. OKLAHOMA absolute title land bargains, 40 to 1,000-acre tracts of coal in new oil and gas field; $5 an acre up. John Cavanagh. McAlester. Okla.

FOR LEASE: 200 acres of good oil land on Monterey-Tampico Railway. Good chance for responsible oil company or wildcatter to start drilling. Particulars, F. Peer, 1680 Salina Ave., Detroit, Mich.

FOR LEASE, Oil and Gas acreage in Section 16-17-19 and 20-12-11, also in Sec. 21-12-9, Okfuskee Co., Okla. Address Box C-961, The Oil and Gas Journal, Tulsa, Okla.

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The last old government structure in Texas. Remember what happened at Mexia and Powell? Major Companies recently purchased some of these tracts. Structure has reliable and never failing indications, 2 shallow gas pools, 1 shallow oil pool. Also shallow oil and gas showings in many places. Lower cretaceous, all Pennsylvania section and Wilcox sands possible. Two deep wells contracted to drill to Seminole Wilcox sands. Will sell few new 10 year 40 acre leases for $150 each. Copy Government structural map abstractors certificate title and assignment forwarded your bank for examination. Write "Oldtimer," P. O. Box 1803. Fort Worth, Texas.

LEASES—PRODUCTION

OWN IN FEE with all oil rights 376,000 acres in Mexico, 50 miles north of Torreon and southeast of El Paso, Texas. Sacrifice $2.00 per acre, $50,000 cash, $50,000 six months and balance spread over a period of 5 years. 90% level land. Excellent oil possibilities. Have log of water well drilled to 440 feet struck oil. Have complete geological report by Jose G. Aguilera, founder Geologists Institute of Mexico City. Mexican-American Land & Colonization Company, 3212 Wilshire Boulevard, Los Angeles, California. Drexel 0292.

LEASES AND ROYALTIES for sale. Drilling Blocks given for wells. O. O. Milliken, Box 63, Oklahoma City, Okla.

LEASE FOR SALE

New ten year lease with fifty cent rentals on Section 1, Block 34, Hudspeth County, Texas. $1.00 per acre. S. E. CURRY, Plainview, Texas, Box 771.

NEW MEXICO OIL LEASES

I have 4,000 acres in Quay County in tracts of 40 acres or up at 33 cents per acre. Rental 5 cents per acre. For maps and detail write Frank Strickland, Sapulpa, Okla.

FINLAY DOME district, Hudspeth County, Texas, looks good. Map and lease prices, $1.00 cash.

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BOX 1591. EL PASO, TEXAS.

FOR SALE—By owner, 80-acre shallow lease near Putnam, 4 wells, all pumping; fully equipped, electrical power, 4 bbls. daily. Address 2001 Ave. D, Cisco, Texas. Telephone 655J, Cisco.

ONE SAFE AND SANE WAY—To engage in the oil business is to buy land in fee (carrying full oil rights) ahead of oil developments; we have a number of such tracts that are rich in agricultural production priced away below its value that can be sold later to get your money back and more with all oil rights reserved to you; many of the major companies operating in the west are now blocking acreage for an extensive drilling campaign. Write C. W. Sweitzer, Eads, Colo.

WILL BUY good production immediately if priced right. Give full information first letter, amount of production, gravity, acreage, plat of property showing location of wells and surrounding wells, pipe line buying oil, price of oil, legal numbers of land. equipment price wanted. Room 210, 200 Broadway, New York City.

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FOR SALE—New Mexico deeded oil royalty ahead of the drill under Major Oil Company lease. Chance for huge profits. Small investment. Terms. Monarch Inv. Co., Roswell, N. M.

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LEASES and royalties, Caddo, Blaine and adjoining counties. Write for complete list. A. E. Baldwin, Anadarko, Okla.

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Major companies own thousands of acres and are producing wells east and west of this tract, which lies midway between two newly discovered pools. Ernest E. Tuggle, Supreme Court Library, Little Rock, Ark.

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WILL sell 1 acre or more Sections 10 and 19, Blk. 194, Pecos County at $250.00 per acre. Glen Myers, San Angelo, Texas.

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ACTIVE WEST TEXAS ROYALTIES $8 square mile. Big company operation. See maps and bulletins. R. R. Fisk, Box 1214-B, Wichita Falls, Texas.

ROYALTIES—PRODUCTION

ROYALTY for sale in Marland Block, Ness County, Kansas. Marland drilling. Other choice royalties under Major Company blocks, West Kansas play. L. B. Schrader, 1821 Classen, Oklahoma City.

SEDGWICK, Harvey County, Kansas, Royalties on core drilled blocks, offsetting drilling wells and locations, also Ness County leases and royalties. James R. Haynes, Grantville, Kansas.

OF INTEREST TO

GEOLOGISTS, ROYALTY DEALERS

and

OIL OPERATORS

A group of substantial business men in the Middle West have organized a company that will engage in the royalty business and will have upwards of a million dollars to invest during the next six months. Correspondence is invited from those who may be interested in becoming associated with this organization, particularly as representatives in the field to purchase profitable royalty properties. Also will consider applications for geology dept. An opportunity is also presented to become actively identified with the management with privilege of cash investment or properties on fair appraisal basis. Unquestionable reference will be furnished and expected. Write in detail—Our representative will visit Tulsa, Fort Worth and near by cities during August and will be pleased to interview interested parties. Address Box D-34, The Oil and Gas Journal, Tulsa, Okla.

WALLER COUNTY TEXAS ROYALTY adjoining TEXAS CO. lease and 8 miles from HUMBLE OIL CO. production. Give full details. Lester Barry, 4117 Enright Ave., St. Louis, Mo.

GEOLOGISTS

OIL LOCATED before drilling. Geophysical method. Toggodometer Instrument; take pay in oil. No oil, no pay. Except traveling and testing expenses. 95 per cent accuracy. O. P. Coffin, Caddo, Tex.

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IMPROVED FARM of 105 acres 10 miles west of Fayetteville, Arkansas. Has nine-room house, bath, hot and cold water. Good barn and other outbuildings. One and one-half acres in grapes and strawberries, also well developed orchard containing peaches and other fruit. Land is well suited to either fruit or dairy purposes. Good cistern, two good wells and fine spring of water. There are two sets of improvements. Place is located one-half mile from highway. Fayetteville is university town. Address P.O. Box 103, Prairie Grove, Ark.

2,500 ACRE RANCH foothills Colorado exceptional location, delightful climate. Especially suited for gentleman's estate, club, dude or stock. Highly improved. Request descriptive circular. Billington, 1014 Lake, Pueblo, Colo., owner.

FOR SALE—80-acre farm, 15 miles from Tulsa, 1 mile west of Broken Arrow, Okla. For particulars write Mrs. Fannie Daly, Box 360, Vaughn, New Mexico.

2,520 ACRE Estate Colorado foot hills exceptional location suitable for home or private club, highly improved, request description. Billington, 1014 Lake, Pueblo, Colo.

164,000 ACRE West Texas ranch improved. Other smaller tracts priced for quick sale. W. E. Wheat, Box 483, Alpine, Texas.

More Orders in Chicago Spot Market

Buyers Out of Gasoline Needing Quick Delivery. Orders on Contracts Also Coming in Pretty Well

By J. B. Waldo

CHICAGO, July 29.—There were more orders in the spot gasoline market on Monday and while most of them were for small amounts single car orders predominating, these orders indicated better buying. In a number of cases it was stated that the buyer was out of gasoline and must have quick delivery. Orders on contracts were also coming in pretty well against August shipments and generally the movement seemed better. There was no rush of orders nor any buying of large quantities but it seemed that jobbers were being forced more generally by the large consumption to order gasoline in the spot market as well as on contracts. As Monday is not the best day of the week it is expected that the buying will increase as the week progresses and that the first of August will show greater activity in the gasoline situation than did the first part of July. The major refiners held their price for the U. S. Motor gasoline at 8 cents and other sellers were asking 7½ cents for good Oklahoma material with West Texas gasoline generally quoted at 7¼ cents. There is quite an amount of distress material on the tracks here, most, if not all of it, from West Texas and this was offered at below the market to secure prompt movement to escape further demurrage charges. There was no demand of any consequence for the higher tests.

Kerosene Slow

Kerosene was neglected, the demand being very light and the outlook not well thought of. Furnace oils show little activity. Some business is being done in high grade distillate for use as tractor fuel but the total sales are small. Industrial gas and fuel oils were moving in a routine way largely on contracts. Some buyers were giving instructions to decrease or omit shipments for brief periods but the movement in industrial oils was good for the season.

The weather continues hot and very little rain has fallen. The consumption over the week end was large and some of the large company stations reported this morning that they were out of gasoline.

One of the most common comments among the oil men of this city last week, was that they had never seen such a market at this time of the year. What they particularly referred to was the absence of buying by the jobbing trade as a whole, while the consumption was, according to all reports, materially in excess of last year. Various explanations are made for this condition and one is the purchase of so many oil distributing companies by the major integrated companies. The tank car sales manager for one of the large integrated companies recently complained that his company had bought out so many of his best customers, that he had no spot business left. In that case the purchaser did not lose the gallonage at the refinery, the business being transferred through the purchase, from the tank car sales department to the concern's own stations. But there are numerous cases in which the purchase of the jobbing company has resulted in a complete loss of the business by the refinery who had previously received the orders for gasoline and other products.

Last week, the sales manager for a large company stated that he had just had a check made of his list of customers and found that within one year, 33 of his good customers had sold out to large integrated companies and that he was finding it difficult to replace these outlets with new accounts. The list of firms who had sold their business included some large and some smaller distributors but all of them would have been classed as good accounts from a credit standpoint. Possibly the average buying of these 33 concerns would be five cars of gasoline a month each, or 165 tank cars a month all told. This would take the monthly output of a small refinery of say 2,000 bbls. daily crude capacity. It is not claimed by this sales manager that he secured all of the business from these concerns although in some cases he had contracts with these jobbers for at least their gasoline requirements. It is common knowledge that the major integrated companies and especially those with headquarters or important offices in this city, and the list is quite large, have been active in expanding their gallonage not alone through purchases but by the making of exclusive contracts. In the enjoyment of these contracts they are now protected by the new code of ethics. If not completely protected they at least have a more direct remedy through an action before the Federal Trade commission than was possible under the common law relating to the making and breaking of contracts.

Fewer Distributors

The purchasing of active oil distributing businesses, has gone further than has been believed by the industry at large. One list of concerns that have sold out that is being complied and kept complete so far as possible, includes over 200 names of well known oil companies. These sales have been announced as completed since the first of the year. The list also includes about 20 oil companies which are understood to have reached an agreement to sell their business to some large company. For some reason the announcement of the sale has not been made yet and the deal may not finally go through. All of the upwards of 200 reported to have sold out, have been confirmed by both seller and buyer. The majority of these concerns are listed as doing business in Standard Oil Co. (Ind.) territory and Ohio, but they include concerns in all parts of the country.

These numerous sales have resulted in a great shifting of accounts from smaller refiners to the larger companies which have been the most active purchasers. And this may account for some of the decline in the spot business but it seems to many that just as important has been the activity of these large companies in reaching out for contract customers. The Standard Oil Co. (Ind.) has not been a buyer of jobbing concerns in its territory yet, according to the statement recently issued by President Seubert, that company has greatly enlarged its list of owned or operated outlets and other major companies like the Shell and Sinclair have been just as active in signing up exclusive contracts with live distributors. And in the case of these contract customers there has been some shifting of the source of supplies for gasoline and other products. Of course some of these concerns that have signed exclusive contracts have been customers of the purchasing company previous to the making of the exclusive agreement.

Marginal Contracts

One of the points discussed is if this condition of which local selling organizations now complain is to continue and if the spot and marginal business is to be permanently decreased. There is a certain relationship between the marginal contract and the spot business. They each are based on the purchase of supplies by a distributor from some refiner. There is a choice in the source of supply. The spot buyer is at liberty to purchase his gasoline or other material from any possible source and even the buyer under a marginal contract can change his refinery at the end of each contract period and during the life of the contract may buy some material from outside sources. The contract and the spot buyer are always to be considered as possible customers by the refining industry. On the other hand the jobbing concern that has sold its business outright to some integrated company must be crossed off the list of possible customers by the refining organizations.

There has been some suggestion that these integrated companies might so increase their gallonage that they would make contracts in turn with other refiners for some portion of their supplies. Some of the integrated companies have bought considerable gasoline and other products such as bright stocks this season but the tendency is for the large integrated companies to increase their own output to the point where they are more likely to have an excess of gasoline to sell than to be a buyer. Above all, the large integrated companies are quick to adopt the very latest equipment or method for securing the largest possible output of gasoline or other valuable products from the crude run. In a recent list of concerns that were at present installing the latest and most efficient cracking plants it was noticeable that it was the great integrated companies which were in the lead. With such a large refining capacity as theirs a gain of but one per cent in the volume of gasoline recovered from the crude run, means a great gain in manufacturing costs. They can afford to experiment with equipment and methods and are not financially weakened if the result of these payments is only the knowledge that the plan did not work successfully. There has been little spot buying by the larger companies in the Mid-Continent Field this year. Last year their purchases were very considerable. As their sales this season are larger in volume, they must secure the gasoline from other sources than the open market and most of it came from their own plants.

Results of Early Buying

But even the purchase of over 200 oil jobbing concerns, and the making of so many exclusive contracts does not explain why the spot market has been so quiet as to demand and has steadily declined in prices for more than a month. The condition was very largely due to the large buying done early in the season. These supplies lasted until the smaller refiners in need of business, began to offer at prices under the regular quotations of the larger concerns. Some of the jobbers filled their tanks early before the season really began at low costs to them. Many continued to replace their sales, whenever they could do so at a price substantially under the regular market until the time arrived when they felt there was not going to be a higher market and then they lay back and proceeded to reduce their storage. Some of them still have supplies of gasoline and are not buying. Others need material but they buy when necessary and for their immediate needs only. There is a possibility that as a number of distributors whose stocks have been reduced to a minimum increases, the demand may be sufficient to give better support to the market and a little export buying in the Mid-Continent Field would be very helpful. Recently the only purchases made by exporters have been of the higher tests which are almost a drug on the market in this territory.

While the market last week, showed little change there did seem to be some increase in the buying by the jobbers. One of their reasons for not purchasing is the fear of a tank wagon decline over this territory. They seemed to be partially reassured as to this possible change until on Friday morning of last week, the Standard Oil Co. (Ohio) reduced its gasoline tank wagon, service station and delivered tank car prices one cent a gallon. Many of the trade here, even some of the largest refiners believed this was a forerunner to a like change in this territory. But conditions are very different in the two territories. In Ohio the Standard Oil Co. is badly pressed to even retain the gallonage it has been able to control, so very keen is the competition. Ohio has a very considerable refining capacity of its own and it is at the same time a dumping ground for gasoline from Pennsylvania, Kentucky and from refineries located in more distant points such as New Orleans and the Chicago district. Competition from water routes both river and lake has caused the making of freight rates that give material differentials to many refineries. Recently the Atlantic Refining Co., as reported at the time, made a price of 11 cents anywhere in the state from its refineries at Franklin and Pittsburgh. Cut prices of 2 and 3 cents were common in some parts of the state all resulting in an unfortunate condition which forced a tank wagon decline right at the height of the season. With August, the peak month, ahead it would seem improbable a tank wagon decline would be forced on the major companies in this territory at an early date.

The somewhat better buying noted in this market, during parts of last week, was not shown in larger orders but in a greater number of small orders. "Nothing but single car orders," said the sales manager of one large refining organization. This was not the exact case but large orders were very rare, so rare that a three or five-car order from one concern was looked upon as rather sizeable. The demand was for the U. S. Motor grade and so infrequent were the orders for the higher gravities it was difficult to obtain prices based on actual sales. One reason for this condition is the claim made by some refiners and distributors that the higher gravities such as the 64-66 375 and the 60-62 400 are not as good motor fuel for the high compression type of auto engine as are some gasolines with a gravity lower even than that of the U. S. Motor gasoline, provided the gasoline is sufficiently volatile. The antiknock gasolines were in very good demand and their favor with the motoring public is shown by the new combinations of any negative word that can be twisted into use with the word "knock" usually abbreviated. Refiners and large distributors are crowding the field with special names, all of which convey the message to the motoring public that their product will reduce or eliminate wholly the knock in the motor.

Prices Little Changed

Prices were very little changed. The major refiners held their price at 8 cents and claim they will not go any lower. Some admit the successive reductions in prices from the peak of the beginning of July of 9¼ cents down to 8 cents has not appreciably increased their spot sales but they claim the reductions in their markets have helped their contract business. One reason they give why they have not increased their spot business is that others with gasoline to sell have made lower prices than 8 cents for the U. S. Motor grade. Some of these lower prices have been for material not up to the full specifications but much of it is,

(Continued on Page 131)

IRON-METERS-CASE

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NO longer will the attack of the sulphur or other deteriorating agents in gas have any effect on the walls of Ironcase Meters. Those walls are now protected so that no matter how corrosive the gas may be, the interior of the cases will remain unblemished. By means of a new coating compound, developed by Metric research, the interior of all cases is now given this protection against corrosion. After being thoroughly sand blasted to secure a smooth surface, the cases are either sprayed with, or soaked in, this special lacquer. It penetrates the pores of the metal, completely covering the entire area—leaving not the tiniest speck of metal exposed. The cases are then baked at a temperature of 350 degrees F. The coating becomes flint-hard, impervious to moisture, and absolutely corrosion-proof to all elements carried in natural or manufactured gases. No rust or scale will form and the cases will remain in perfect condition.

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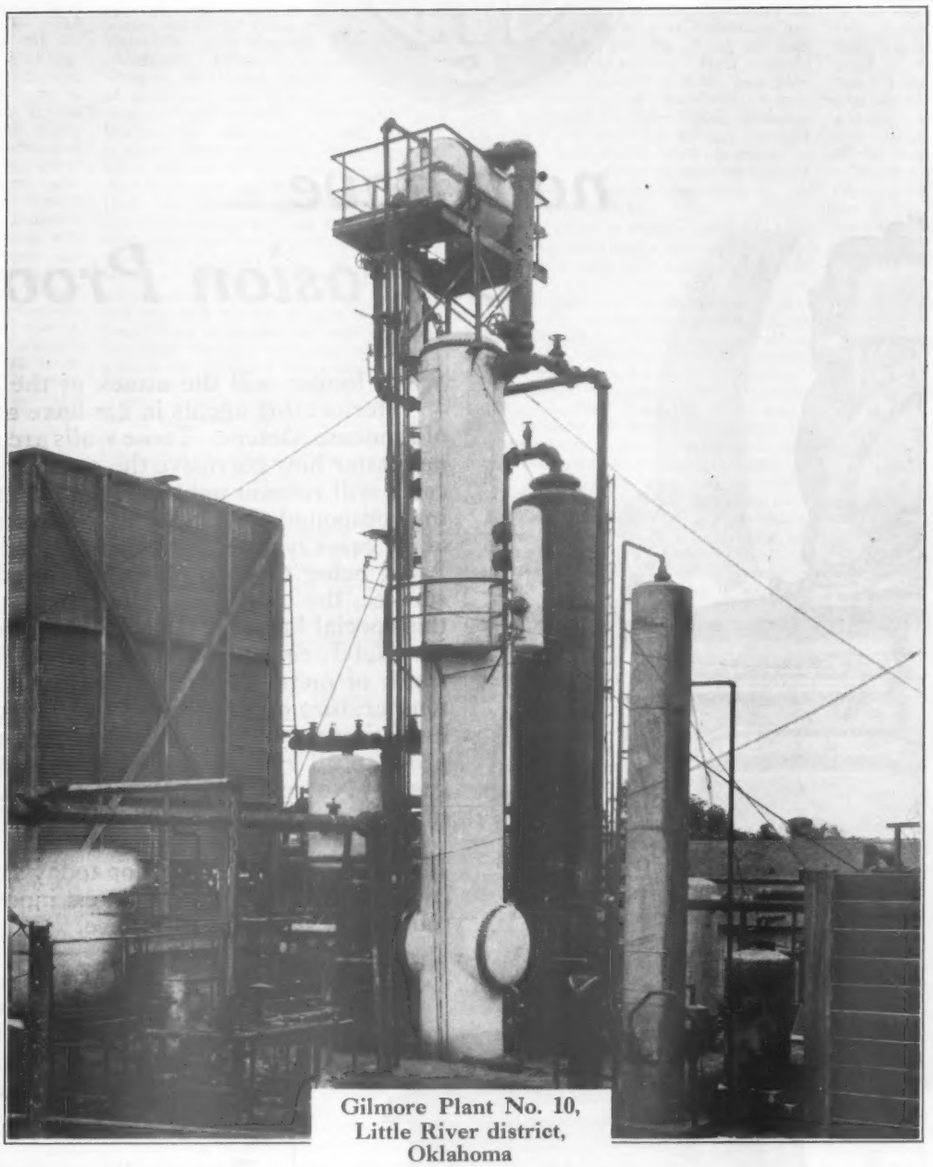

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Natural Gasoline Manufacture

To Start Building Gasoline Plant in Richland Gas Area

SHREVEPORT, La., July 29.—Richland Parish Gas Field's third absorption gasoline plant, to be built by the Columbian Gasoline Corp., two miles north of Alto, will shortly begin construction. It will operate at 400 pounds, handling 40,000,000 feet of gas per day maximum, with a yield on that basis of 12,000 to 16,000 gallons. Residue gas will go into the Richland-Monroe-St. Louis gas line, scheduled for completion about October 1, by which time the gasoline plant also will be completed.

There will be four 16-tray 48-inch bubble type absorbers with centrifugal scrubbers on inlet and outlet sides, and a 4-foot vertical steam still with reflex column mounted on top. Absorbers and still will be Ereco type, while the heat transfer apparatus, exchangers and oil coolers will be Griscom-Russell. There will be only one set of oil pumps, transferring oil direct from the lean tank to absorbers, absorber pressure forcing the oil through the heat transfer system into the still. The distillation unit will operate through the heat exchangers and cooling coils into the lean tank.

A 16-tray re-absorber will process vapors from the vent tank, located between the absorber and distillation equipment. There also will be an Ereco type fractionating column, the company anticipating turning out propane-free gasoline of 90 to 95 recovery. In connection with the oil pre-heaters and the internal heater on the still, 200 pounds steam pressure will be maintained in order to secure ample temperature for the 50-pound distillation pressure. The plant is designed for 400 gallons per minute oil circulation in order to take care of lower pressures on which the plant will eventually have to operate, its present operating pressure being the natural field pressure.

Gasoline will be pumped 5 miles to loading rack at Archibald, but all storage will be at the plant. In connection with the plant proper the company will build eight modern dwellings and an office building for the plant operatives and field men.

TO FINISH STABILIZING UNIT ABOUT OCTOBER 1

HOUSTON, Tex., July 29.—The stabilizing unit which the Phillips Petroleum Co. is building on the Houston Ship Channel near Pasadena will be completed about October 1 according to those in charge of construction. The plant, which including site and storage facilities, will represent an investment in excess of $1,000,000 is being built to treat and stabilize gasoline for export movement.

The Phillips company is the largest manufacturer of natural gasoline with a large output in the Mid-Continent area. Some of the so-called stabilized gasoline has been sold to foreign buyers in cargo lots and when the new plant is completed it is expected that the volume of this business will increase. The ordinary grades of natural gasoline will be shipped to the Pasadena plant and stabilized to meet export requirements. This operation consists in removing the lighter hydrocarbons so that the final product is suitable for motor fuel without further blending. The gasoline in this operation is redistilled and fractionated.

In addition to the plant, one large 80,000-bbl. breather type storage tank and two 10,000-bbl. spheroid tanks for pressure storage are being erected. A large number of smaller tanks are also to be installed.

USE NATURAL GASOLINE PRODUCT IN FLIGHT OF ST. LOUIS ROBIN

Natural gasoline manufacturers are particularly interested in the record-breaking endurance flight of the St. Louis Robin which at this writing had passed the 400-hour mark in continuous flight at St. Louis.

The airplane is being fueled by "Naturaline," a motor fuel manufactured from natural gasoline by the Chestnut & Smith Corp., Tulsa, and sold by the Naturaline Co. of America, an affiliated company. The gasoline is being supplied by the Naturaline dealer at the St. Louis airport.

Aside from the endurance record which has been established the flight is unique in endurance tests in that it is the first to be fueled with a product of natural gasoline and the first time that the gasoline manufacturer was not informed of the flight until it was already in progress. The St. Louis Robin, with Dale Jackson and Forest O'Brine as pilots, was in the air 50 hours before the Naturaline company officials were told that their product was being used as fuel. The gasoline used was furnished by the St. Louis dealer from storage which supplies all other customers at the St. Louis airport.

The flight was made for the purpose of testing a new type engine manufactured by the Curtiss Aeroplane & Motor Co., Inc. and was sponsored by that company and the Curtiss-Robertson Airplane Manufacturing Co., manufacturers of the plane. The Curtiss company had previously used Naturaline in regular flying and selected it for the test flight without consulting the manufacturers. The motor is a six-cylinder radial air cooled challenger of 170 horsepower. Fuel consumption was at the rate of 9 to 10 gallons per hour.

The Naturaline company has been active in the sale of Naturaline at airports over the past two years. The motor fuel is a stabilized product which meets certain established specifications for airplane use. A well-balanced volatility, less weight and a high antiknock rating are the properties which have found favor in the aviation trade.

Part of the success of the fuel has been due to the constant testing being done by three airplanes owned by the Naturaline company. These planes are in general charge of Fred L. Foster who has flown approximately 100,000 miles in the past year and a half demonstrating and selling the fuel.

He is assisted by his son, Paul Foster, who flies a Stinson Whirlwind, Jr. and Hubert Harder, the pilot of a new Challenger Robin recently purchased by the company. The latter plane is the same type as the St. Louis Robin.

These three planes are constantly in service keeping in touch with Naturaline dealers in all parts of the country west of the Rocky Mountains. Paul Foster with the Stinson Whirlwind, Jr. last week was flight leader in the Georgia State Air Tour in which 22 planes participated.

NEW WEST TEXAS PLANT

The Humble Oil & Refining Co. has started construction on a gasoline plant in the Yates Pool of West Texas. It is the first plant to be built in that area. The plant has been specially designed to handle a large volume of lean gas with high sulphur content. The plant will have an initial capacity of 25,000,000 cubic feet of gas daily from which 20,000 gallons of gasoline will be obtained.

A PRACTICAL SUGGESTION

COOLING TOWERS

During this time of the year nearly all plant operators experience some trouble due to unsatisfactory cooling, especially of the absorption oil. There are few plants that have not had oil temperatures as high as 90 degrees Fahrenheit, as the unusually high relative humidity has made cooling particularly difficult the past two months.

Plant operators who have not experimented to find the amount of water that gives the lowest temperatures, use far more than is needed to give the best results. Water falling in excessive quantities in a tower does not acquire the lowest possible temperature from radiation or evaporation, and the large bulk of water flowing over the coils cannot cool as efficiently as a smaller amount does. The best results are obtained when minimum quantities of water are circulated and finely divided while passing downward through the tower. Only enough of the cooled water should be directed onto the coils to keep them thoroughly wet, thus giving the water the greatest possible opportunity to evaporate.

The rate of evaporation of the water depends on the relative humidity of the atmosphere; the relative humidity being the quantity of water vapor present in the air compared to the quantity of water vapor in the air if it was saturated at that given temperature. This season has had especially high humidities. Today in Oklahoma the maximum temperature was 92 degrees Fahrenheit, and the humidity 91 per cent maximum and 50 per cent minimum. The lowest wet bulb temperature under these conditions would be 90 degrees and 77 degrees, that is, with perfect cooling at the maximum air temperature, the water in the pit could only be 90 degrees (at 91 per cent humidity and 77 degrees at 50 per cent humidity).

To give greater pressure to the water sprays as a temporary arrangement, steam pumps can be connected and high pressure gas from the recompressor or high stage compressor used as power. Excessive circulation of water in dephlemator or excessive quantities of steam passing uncondensed through the dephlegmator may be remedied by boiling it out thoroughly with muriatic acid.

Water lines, especially at bends, gradually accumulate sediment which will not permit sufficient water circulation. This may be easily and quickly cleansed by connecting to a high pressure air tank and "shooting." Where there is a large surplus of residue gas, a connection can be made into the spray line and the gas turned in periodically to keep the sprays cleaned out.

Practical suggestions by those connected with the construction and operation of natural gasoline plants are invited. Payment will be made as soon as suggestions are accepted. Address all communications to the Natural Gasoline Department, The Oil and Gas Journal, Tulsa.

BUCHANAN RESIGNS FROM CHESTNUT & SMITH CORP.

D. E. Buchanan, widely known in the natural gasoline and refining industries, has resigned as vice president of the Chestnut & Smith Corp., Tulsa. He has also resigned as vice president of the Naturaline Co. of America, an affiliated company.

Mr. Buchanan's work in the natural gasoline industry has been outstanding for several years. Although primarily interested in the sale of natural gasoline, he also took an active interest in the technical phases of plant operation, including the development of new products. He was active in association work, and for two years was president of the Naturaline Gasoline Association of America. For several years he has represented the

D. E. Buchanan

natural gasoline industry on the board of directors of the American Petroleum Institute.

Mr. Buchanan was connected with the Chestnut and Smith Corp. for a period of 10 years. He was sales manager of the company for several years, and was then elected vice president in charge of sales. About two years ago with associates he organized the Naturaline Co. of America to promote the sale of Naturaline, an aviation motor fuel manufactured from natural gasoline. This product has been marketed at airports throughout the Middle West and East with marked success.

NEW WEBSTER PARISH COMPRESSOR STATION

SHREVEPORT, La., July 29.—The Palmer Corp. has awarded a contract for the construction of a compressor station in the Cotton Valley Field of Webster Parish to serve its gasoline plant and also its line to Shreveport, handling low pressure gas from Cotton Valley and the Sarepta and Shongaloo districts.

Equipment will consist of seven twin gas engine-driven compressors, six of them working on 100 to 200 pounds suction and 350 pounds discharge pressures. The seventh unit will be used for recompressing still vapors from the absorption plant for delivery to the pipe line, working on 30 pounds suction and 350 pounds discharge pressures. The six units will handle 20,000,000 feet of field gas per daey at present and the recompressing unit about 1,500,000 feet.

Brief Items for Petroleum Refiners

WOODMAN, PRESIDENT OF RICHFIELD OF NEW YORK

NEW YORK, July 29.—Physical consolidation of the Walburn Petroleum Co., Acewood Petroleum Co., and other units composing the recently organized Richfield Oil Corp. of New York, Eastern marketing subsidiary of Richfield Oil Co. of California, was effected here today when the corporation opened its new offices in the Chanin Building, 122 E. 42nd street.

Richfield Oil Corp. of New York has already developed distribution of its products in New York, New Hampshire, Vermont, Maine, Pennsylvania, New Jersey, Connecticut, and Massachusetts, and will have a number of ocean and bulk distributing terminals in the East.

Woodman President

A. C. Woodman, president of Acewood Petroleum Co., and formerly associated in an executive capacity with the old Union Oil Co. of Pennsylvania and later with Sinclair Consolidated Oil Corp., is president of Richfield Oil Corp. of New York. Ralph Walsh, president of Walburn Petroleum Co., is vice president and general manager. Other officers are Clinton Longshore, former vice president of Acewood, vice president of Richfield of New York; W. Chalmers Burns, former vice president of Walburn, vice president and treasurer of the new company; Raymond M. Parker, Jr., former vice president of Acewood, vice president and secretary of Richfield of New York, and Edward Bush, assistant secretary. C. M. Fuller, president and general manager of Richfield Oil Co. of California, and James A. Talbot, chairman of the board of the parent company, are on the board of Richfield Oil Corp. of New York.

REFINE SPECIAL NAPHTHA FROM DUNDEE SAND CRUDE

The new refinery which the Old Dutch Refining Co. is building at Muskegon, Mich., has been designed so that a large part of its output will consist of special naphtha and kerosene. The plant is to operate with Dundee and crude oil. The gasoline obtained from this crude oil has high knocking properties and in the early days of the field it was thought that due to this fact the crude oil would be of little value in refining. To pass the knock test for the ordinary grade of gasoline it is necessary to blend approximately 35 per cent benzol.

Investigation has shown however that the fractions which constitute the gasoline cut from the crude oil are suitable for the manufacture of special naphthas. The Old Dutch refinery which is being installed by the Southwestern Engineering Corp. was designed so that several overhead streams can be obtained. It is expected that finished naphthas with end points of 225, 280, 342, 415 and 465 will be obtained. These cuts will be sold to the dry cleaning, paint and rubber industries for special uses. A high grade kerosene cut is also obtained.

REPORT PARAGON MERGER

NEW YORK, July 30.—While negotiations for a consolidation of the Paragon Refining Co. of Cleveland and Valvoline Oil Co. of New York have been in progress for some weeks nothing definite looking toward such a merger has been done as yet according to an official of the latter company. "The question of such a consolidation has come up between the two companies and there has been some talk of a merger but nothing has been done as yet and we would rather not comment on the report further at this time," it was stated at the company's office here.

GASOLINE TAX REVENUE TO TOTAL $1,557,000 DAILY DURING AUGUST

Beginning Thursday, August 1, when every state in the United States will have a gasoline tax the marketing branch of the oil industry will start collecting taxes from its customers at the rate of $1,557,000 daily.

On Thursday, a 3-cent tax becomes effective in Illinois, the last state to enact legislation to provide for a tax. As one of the five largest gasoline consuming states in the United States, the 3-cent tax in that state will add substantially to the revenue derived from the state gasoline taxes. It is estimated that the tax collections in Illinois for August will exceed $2,500,000.

The goal of a tax in every state has been reached within a period of 10 years. The first gasoline tax of 1 cent became effective in Oregon in 1919. Starting on Thursday, every state and the District of Columbia will haxe a tax of from 2 to 6 cents. As shown in the accompanying table eight states have a 2-cent tax, eleven 3 cents, one 3.5 cents, nineteen 4 cents, eight 5 cents and two 6 cents.

8-CENT GASOLINE TAX

Governor Hardman of Georgia has sent a special message to the state legislature now in session recommending that an 8-cent-per-gallon tax on gasoline be collected for the rest of the year with a 5-cent tax in 1930 and 1931.

Indicative of the rapid growth of the tax in the past two and one-half years, on the last day of 1926 four states did not have a tax, two had 1 cent, twenty-one 2 cents, one 2.5 cents, ten 3 cents, four 3.5 cents, five 4 cents and two 5 cents. These totals include the District of Columbia.

The growth of the state tax has been particularly rapid since the first of the year. Many State Legislatures were in session and in all of these states, bills were introduced providing for increases in tax rates and in three states legislation was enacted providing for the initial tax. These states were New York, Massachusetts and Illinois. The latter state for a short period in 1927 and early in 1928 had a 2-cent gasoline tax which became ineffective when the law was declared unconstitutional by the State Supreme Court. Legislation providing for the Massachusetts tax was enacted in 1928 and the law became effective the first of the year.

Since the first of the year 20 states have passed laws providing for higher taxes. In 19 of these states the increases are already effective and the Oregon increase will become effective January 1, 1930. There is a possibility that special sessions of legislatures will increase the tax rate in additional states before the end of the year.

The excuse given for the increases is invariably the same. Most of the states have extensive road-building programs under way or planned. Additional revenue is needed to carry out these programs and a higher gasoline tax is invariably the method used to secure the needed funds.

Two states—Florida and South Carolina—have 6-cent taxes and a bill has been introduced in the Georgia Legislature providing for a similar rate. Many oil men fear that the lead of these states will be followed by other states in the near future. A few years ago a 4 or 5-cent tax was unknown, but now 39 states have a tax of 4 cents or higher. The average for all states is in excess of 3 cents a gallon.

The following table shows the growth in revenue derived from state gasoline taxes:

Year—	Total tax collected
1922	$5,100,000
1923	36,813,939
1924	75,648,510
1925	146,028,940
1926	187,603,231
1927	258,838,813
1928	304,871,766
1929*	400,000,000

*Estimated.

The exceptionally large increase estimated for 1929 is due to the increase in tax rates previously mentioned and the fact that three large consuming states which previously did not have taxes now have laws in effect which will add to the total for the year.

It is estimated in the accompanying table that the tax collection for August will total $48,284,000. This is at the rate of $1,557,000 or approximately $560,000,000 yearly. August is the largest consuming month in most states and the total will be greater than the average monthly collections for the year. However, it is apparent that for the year ending August 1, 1930, the gross receipts from gasoline tax collections will total around $500,000,000.

GASOLINE TAX BY STATES

State and date effective—	Per gal. tax	Est. revenue Aug.
Alabama, Jan. 25, 1927	4	$666,000
Arizona, Aug. 12, 1927	4	183,000
Arkansas, June 9, 1927	5	550,000
California, July 29, 1927	2	3,189,000
Colorado, May 1, 1927	4	750,000
Connecticut, June 1, 1927	2	395,000
Delaware, March 24, 1927	3	75,000
Dist. of Col., May 23, 1924	2	124,000
Florida, July 1, 1929	6	994,000
Georgia, Sept. 1, 1927	4	801,000
Idaho, March 1, 1927	4	277,000
Illinois, Aug. 1, 1929	3	2,584,000
Indiana, April 1, 1929	4	1,746,000
Iowa, April 30, 1927	3	1,445,000
Kansas, April 1, 1929	3	1,255,000
Kentucky, Feb. 21, 1926	5	804,000
Louisiana, Jan. 4, 1929	4	658,000
Maine, Oct. 29, 1927	4	517,000
Maryland, April 1, 1927	4	650,000
Massachusetts, Jan. 1, 1929	2	822,000
Michigan, Sept. 4, 1927	3	2,428,000
Minnesota, May 1, 1929	3	1,261,000
Mississippi, Dec. 1, 1928	5	690,000
Missouri, Jan. 1, 1925	2	780,000
Montana, April 1, 1929	5	476,000
Nebraska, April 1, 1929	4	985,000
Nevada, April 1, 1925	4	69,000
N. Hampshire, Jan. 1, 1928	4	292,000
New Jersey, July 1, 1927	2	960,000
New Mexico, March 7, 1927	5	198,000
New York, May 1, 1929	2	2,420,000
N. Carolina, April 1, 1929	5	1,200,000
North Dakota, July 1, 1929	3	517,000
Ohio, April 18, 1929	4	4,036,000
Oklahoma, June 23, 1929	4	1,205,000
Oregon*,	3	533,000
Pennsylvania, July 1, 1929	4	2,948,000
Rhode Island, June 1, 1927	2	151,000
S. Carolina, March 16, 1929	6	614,000
S. Dakota, July 1, 1927	4	614,000
Tennessee, Feb. 16, 1929	5	950,000
Texas, July 16, 1929	4	2,675,000
Utah, April 1, 1925	3½	188,000
Vermont, April 1, 1929	4	229,000
Virginia, March 19, 1928	5	1,020,000
Washington, July 1, 1929	3	800,000
W. Virginia, July 1, 1927	4	488,000
Wisconsin, April 1, 1925	2	887,000
Wyoming, April 1, 1929	4	185,000
Total		$48,284,000

*Oregon tax of 3 cents to be increased to 4 cents January 1, 1930. Note—Estimates were based on 10 per cent increase in gallonage over August, 1928, where gasoline tax figures were not available consumption was estimated based on car registration.

WILLIAM H. HASTINGS DIES

Funeral services for William H. Hastings, 55, superintendent of the Corsicana, Tex., refinery of the Magnolia Petroleum Co., were held July 22 at Corsicana. Officials of the Magnolia company at Dallas attended the services.

Important Changes in New Agreements for Ethyl Gasoline

The Ethyl Gasoline Corp. has submitted new forms of License and Sales Agreements to its licensees to become effective August 15, involving several changes in the specifications of the base fuel and the antiknock standard required in the finished motor fuel. Prices on tetraethyl lead the chemical used in blending have been lowered.

In regard to distillation range for the base fuel the new agreement provides as follows:

From April 1 to October 1: not less than 8 per cent off at 158 degrees Fahrenheit, and not over 428 degrees Fahrenheit, endpoint.

From October 1 to April 1: not less than 10 per cent at 158 degrees Fahrenheit, and not over 428 degrees Fahrenheit endpoint.

The present specifications as to distillation range are:

From April 1 to October 1: not less than 5 per cent off at 158 degrees Fahrenheit; not less than 20 per cent off at 212 degrees Fahrenheit and not over 428 degrees Fahrenheit endpoint.

From October 1 to April 1: not less than 8 per cent off at 158 degrees Fahrenheit; not less than 22 per cent off at 212 degrees Fahrenheit and not over 428 degrees Fahrenheit endpoint.

These changes will give a more volatile motor fuel throughout the entire year.

In regard to the new antiknock standard and the lowering of tetraethyl lead prices the announcement of the Ethyl Gasoline Corp. states:

"The antiknock value of the new Ethyl standard will represent the addition of one-fourth cubic centimeters of tetraethyl lead to the antiknock value of our present standard. The minimum amount of lead to be mixed with one gallon of gasoline has been increased from three-quarters of a cubic centimeter to one cubic centimeter. The maximum remains at three cubic centimeters. Samples of this improved Ethyl standard from a knock standpoint will be supplied on request.

"We believe this increased antiknock value is but keeping in line with improvements that have been made and are going on in the automotive and refining fields. You are doubtless aware of the fact that most automobile manufacturers have increased the compression of their cars within the past two years with consequent increased efficiency and economy. We, of course, should at least keep pace with developments that are so intimately associated with the business in which your company and ours are engaged.

"In improving our standard we are doing so not only at no additional cost to any customer, but to each there is a reduction in the unit cost per gallon of gasoline treated. This is accomplished through the reduction in gallonage charge from 7/10c to 6/10c and the price of tetraethyl lead from 5/10c to 4/10c per cubic centimeter of lead. We attach a statement showing the relative cost under the existing standard and price, as compared with the new.

"As we view the antiknock picture today and the trend of events, we think that the soundest foundation for the Ethyl business is a policy of gradually increasing our standard provided we make a proportional reduction in price to our customers, and to go a step further—if we believe conditions will justify it—by reducing the price so that our customers will be able to meet such gradually increased standard at less cost. This will, obviously, be the more speedily realized

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STUDY FLOW EFFECT ON FORMATIONS OF COKE

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oven is electrically heated and a motor driven fan circulates the hot air within the oven in order to provide a uniform heating medium which may be maintained at the desired temperature. A heavy iron stand, with balance weight for raising and lowering the oven was conveniently located and a pyrometer connected to a thermocouple within the oven registers the temperature. In order to obtain uniform conditions within the silica tube a novel stirring arrangement comprising a loosely fitted steel ring within the tube and a movable electro magnet outside the tube is provided. By moving the electromagnet up and down, the steel ring follows and efficiently stirs the liquid within the tube.

Operation of Apparatus

In order to operate the apparatus, the silica tube is filled with air-free, dry mercury and inverted in an open vessel of the same mercury. The amount of oil to be tested is inserted in the tube by means of a bent pipe and fills the tube to about 5 centimeters. A rubber band is then stretched across the mouth of the tube while still under the mercury, and the whole assembly lifted and inserted into the open gland of the apparatus, the plunger of which has been previously adjusted so the mercury in the apparatus is nearly overflowing. The rubber band is removed and the tube tightened. Thereafter the oven is lowered and heat applied. The behavior of the oil under any practical temperature and pressure may be thus observed. Critical temperatures and vapor pressures may be easily determined and cracking phenomena are visible under the conditions of the experiment.

EASTERN TANK CAR STABILIZED AT DIME

(Continued from Page 121)

the recently-revised price basis. Industrial grades of petrolatum are also in slightly better demand on the spot position.

Refiners are showing rather firm views on petrolatum for delivery over the remainder of the year, and appear to be looking for the development of a firmer price basis by the time the third quarter gets under way. In this connection, sellers point out that movement of petrolatum to the pharmaceutical trade, both at home and abroad, was exceptionally heavy during the past winter, and the same condition is expected to obtain this year. As a result of this feeling, sellers are not inclined to take on heavy forward committments at the present price basis, either for export shipment or for domestic consumption. There is no difficulty in locating spot supplies at quoted levels.

Export Market

Unconfirmed reports in the market here state that a cargo of approximately 10,000 tons of 62-62 gravity, 400 endpoint naphtha was sold at the Gulf this week outside of the Export Association range, but the price involved was not learned. The sale was made c.i.f. United Kingdom. The Export Association price on this grade is 9½ cents, f.o.b. Gulf. One local interest reported it had been offered a cargo of 60-62 gravity, 400 endpoint naphtha for August shipment at 8⅞ cents, five-eighths cent under the established price, but would not mention the name of the seller. Up to the time of writing, this cargo had not been booked.

Export demand for kerosene has continued sluggish, with no large fixtures reported. A moderate movement of cased kerosene is reported. Export operators are watching with interest the situation between Russia and China, in view of the fact that Russia during the past few years has largely cut into American sales of kerosene in China. An open rupture between Russia and China, it is felt, would result in American refiners regaining much of the Chinese business in illuminating oil.

Lub oil sales for shipment abroad have picked up a little this week, but volume is still far from heavy. Export operators are picking up small lots for prompt shipment, but are not operating ahead, expecting further price concessions on cylinder stocks within the next few months.

Paraffin wax is in demand for forward shipment in export circles but the volume of actual trading remains small, refiners being unwilling to book futures on the basis of current quotations. A little more demand for spot scale developed this week, and the market is up an eighth cent per pound at 2⅞ cents.

Fuel and gas oils have continued to meet with but a moderate export demand this week, with no changes reported in the price basis at the Gulf on either oil.

Petroleum Exports

The following table shows principal exports of refined petroleum products from New York during the past three weeks (all figures in gallons unless otherwise noted):

	Week Ended		
	July 20	July 13	July 6
Gasoline	635,000	38,000	205,000
Naphtha	918,300	532,700	2,000
Kerosene	910,000	54,000	33,000
Fuel oil	26,000	8,000	169,900
Lubricating oil	2,119,600	2,889,400	1,820,800
Petroleum, refined	2,590,100	1,118,200	274,400
	Pounds	Pounds	Pounds
Petrolatum		111,500	
Paraffin wax	1,713,400	1,381,500	1,902,400
Refined			265,000
Scale	84,000	559,000	437,000
Lubricating grease	1,590,800	1,445,800	556,400

Imports

Imports of crude and refined oils at the principal United States ports for the week ended July 20 totaled 1,720,000 bbls., a daily average of 245,714 bbls., compared with 2,107,000 bbls., a daily average of 301,000 bbls. for the previous week and a daily average of 290,107 bbls. for the four weeks ended July 20. Details follow:

	Bbls. of 42 Gals.
At Atlantic Coast Ports—	
Baltimore	221,000
Boston	150,000
New York	795,000
Philadelphia	365,000
Total	1,531,000
Daily average	218,714
At Gulf Coast Ports—	
New Orleans & Baton Rouge	124,000
Port Arthur & Sabine District	65,000
Total	189,000
Daily average	27,000
At all United States Ports—	
Total	1,720,000
Daily average	245,714
Daily average four weeks	290,107

California Oil Receipts

Receipts of California crude and refined oils at Atlantic and Gulf Coast ports for the week ended July 20 totaled 159,000 bbls., a daily average of 22,714 bbls., compared with 622,000 bbls., a daily average of 88,857 bbls. for the previous week and a daily average of 66,857 bbls. for the four weeks ended July 20. Details follow:

	Bbls. of 42 Gals.
At Atlantic Coast Ports—	
New York	159,000

There were no receipts at other Atlantic ports or at Gulf ports during the week. The 159,000-bbl. cargo reaching New York consisted of gasoline.

While the movement of California gasoline for the week was sharply under that of previous weeks, this was due to the fact that the scheduling of tankers leaves periodical gaps in the arrival schedule.

SWINGING PLATFORMS ARE VERY PRACTICAL

(Continued from Page 123)

spaced about one-half inch apart to permit dirt and oil to be scraped off in walking over them. The frame of the swinging platform extends about 2 feet beyond the wooden platform and this arm sets up against the main support when in use.

This extension also serves to hold a weight to very nearly counterbalance the movable platform. A chain extending from the loading rack railing to the end of the platform is used by the loading rack man to raise the platform after he has finished loading. In order to shorten the length of the movable platform and in turn lessen the load, a little platform extends out from the loading rack. This is simply a piece of sheet steel welded to the supporting bars.

Where the rack is situated for the loading cars on both sides, the platforms may be set opposite and a common pair of angle irons used to support both swinging platforms.

Swinging platform used on the loading rack at the Bristow refinery of the Transcontinental Oil Co.

NEW ORDERS IN THE CHICAGO SPOT MARKET

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and that that is not is usable and jobbers will buy it for the price. Usually the full specification, Oklahoma gasoline sold at 7½ cents last week, in ordinary quantities or to the average concern but good buyers could buy at 7⅝ cents. For equally desirable material from other points of origin the price was largely 7¼ cents, but towards the very close of the week as the result of weaker elements in other markets such as the Ohio price cut and the heavy rains in parts of this territory, the market softened a little although it was not quotably lower than 7¼ cents with some Oklahoma gasoline selling at that price. The week ended with a quiet situation and the feeling that almost anything might happen during August but not much until after the beginning of that month.

Kerosene Demand Light

Kerosene was in light demand and easy in tone, in part because of the lack of movement and in part because of the decline in Ohio tank wagon market. Some sales were made at 5⅛ cents for 41-43 gravity and at 4⅞ cents for the 40-42 gravity and for the regular 41-43 the larger refiners made some sales at 5½ cents. Occasional cars comprised the business done.

Distillates Slow

Distillates are still moving slowly to the trade although many contracts have been made for the coming season. Occasionally some buyer will order out or is induced to take in a little distillate on contract but there is no large movement here and no seller expects much movement until well into August. Prices are steady and there is little distillate offered. It is right now a waiting market, waiting for the beginning of the season of active business. Unlike gasoline distillates do not sell in any quantity the year round. Some industrial users order a car now and then and the sellers who know when and where, pick up a little business from this source.

Gas Oils

Gas oils the trade figure ought to be a little lower in price but they are not. Some say that it is because the refiners are choosing to hold their straight run gas oil for cracking and that when the gasoline season is over for the crackers, straight run gas oil will be lower. Naturally if the refiners do hold for cracking and the gasoline market does not make cracking profitable there might be a weaker situation if all started to sell at the same time. On the other hand the supply of the light gravities of zero fuel oils was too small last winter and much gas oil was used to blend with heavier oil to produce the required gravity. The gas companies are according to several reports well supplied for the present and some claim for the season, having closed contracts on favorable terms. There is enough demand to maintain the market. Zero gas oils are selling to some extent for various purposes and some stocking for the coming winter is going on. Prices are firm. One refiner offered a light straw gas oil, sweet and with low flash having a gravity of 30-34 at 2⅝ cents and sold the major portion of the offering to a local marketer. The color was almost a prime white. This was undoubtedly a low price for such a quality of oil although there might be occasional objections on account of the gravity by some buyers. This seemed to be close to the bottom of the market for a straw gas oil and even the darker oil if the flash was right and the odor good was hard to buy at 2½ cents, in Oklahoma. Cosden & Co. have been selling a large quantity of gas oil but are now holding their straightrun product for the use of their cracking plants which are expected to begin operations by the middle of August. In fact there is much less gas oil available from the West Texas plants than a month ago and several refineries are now closed down or operating at part capacity owing to light crude supplies and higher costs of the crude that they can obtain. Some buyers are hesitating as to filling their tanks as they look for lower costs but the season is not far distant although the present spell of extreme heat may make the trade forget it, when the requirements for both straightrun and zero gas oils will be greatly increased.

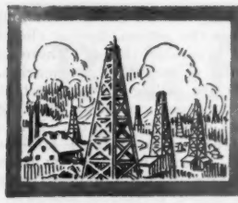
Fuel Oil

Fuel oils are moving along, very largely in a routine way. The heavy oils are held with some show of firmness and it is largely from previous purchases that the low prices on the usual gravities are quoted. Certainly no known source of supply is quoting openly at the prices named to buyers here of very ordinary quantities. But the fuel oil spot business is scarce and sellers must do business so they are using every possible method to get their share. Some very heavy fuel oil is being moved at prices that seem low but the trouble is very few plants can use a 10-degree gravity fuel oil. The movement of fuel oil is good for the season, and should increase as there is some let down owing to the time of the year. In another 30 days the fall season will be at hand and shortly thereafter there will be the early demand for heating. The outlook continues fairly favorable and the optimistic look for a larger consumption than last winter. Much depends on the stocks in refiners' storage. Local fuel oil men do not see any immediate menace in the local plans for the sale of natural or coal gas to the industries or for home heating purposes. One organization plans to bring natural gas from the Southwest to this city where it will be blended with the artificial gas to give the combined product a higher heating value. The other project is for the distillation of industrial gas from bituminous coal at low temperature and its distribution through lines to be laid on the rights of way of two of the belt railroads. What with oil, coal and gas of various kinds this district promises to be well fueled for manufacturing purposes.

Lubs Unchanged

Lubricating oils are unchanged. The demand for motor fuels is very good. Industrial lubs are not as active but are still moving in good quantities. Bright stocks are very strong and other refinery stocks are holding their own.

There is admittedly an increase in the amount of price cutting over the Standard Oil Co. (Ind.) territory. It is not as noticeable in the traffic centers as in the outlying sections of the larger communities and along the highways where the small dealers are striving to secure some of the present trade of the many tourists. There is no complaint of any lack of touring business. The margin of profit is large, too large for stability of prices. In this state the new tax law goes into effect on August 1 and this will add 3 cents to the cost of gasoline.



REFINERY AND CRUDE PRICES

Quotations on refined products are for interstate or export movement unless otherwise noted.

GASOLINE AND NAPHTHA

OKLAHOMA (Group 3)—	July 30		July 23		July 16	
50-52 450 endpoint	.07½	.08	.07¾	.08¼	.08	.08½
56-58 450 endpoint	.07¼	.07½	.07¼	.07½	.07¾	.08
*58-60 437 endpoint (U. S. Motor)	.0798		.0805		.0853	
*60-62 437 endpoint	.0769		.0819		†.08¼	.08½
*60-62 400 endpoint	.08		.0847		.0883	
*64-66 375 endpoint	.0875		.08		.0929	
68-70 360 endpoint	.08	.08½	.08¼	.08¾	.08¾	.09
64-66 437 endpoint (blend)	.07½	*07¾	.07¾	.08	.08	.08¼

*Weighted average prices July 29, 22 and 15, as reported by representative refiners. Sales to jobbers only. †No sales reported. Price indicated is general market.

NORTH TEXAS—						
56-58 450 endpoint	.07¼	.07½	.07½		.07¾	.08
58-60 460 endpoint	.07⅛	.07¼	.07½	.07¾	.07¾	.08
58-60 437 endpoint (U. S. Motor)	.07¼	.07½	.07½	.07⅞	.07¾	.08¼
60-62 400 endpoint	.07½	.07¾	.07¾	.08	.08	.08¼
64-66 390 endpoint	.07¾	.08	.08	.08¼	.08¼	.08⅜
64-66 375 endpoint	.08	.08¼	.08	.08½	.08½	.08⅝
68-70 360 endpoint	.08	.08¼	.08¼	.08½	.08½	.08¾
64-66 437 endpoint (blend)	.07½	.07⅜	.07½	.07¾	.07¾	.08
***NORTH LOUISIANA—**						
58-60 437 endpoint (U. S. Motor)	.08¼	.08½	.08½	.09	.09¼	.09½
***ARKANSAS—**						
58-60 437 endpoint (U. S. Motor)	.08¼	.08½	.08½	.09	.09¼	.09½
PENNSYLVANIA—						
52-54 Naphtha	.09	.09½	.09	.09½	.09	.09½
54-56 Naphtha	.09½	.09¾	.09½	.09¾	.09½	.09¾
58-60 Gasoline	.09¾	.10	.09¾	.10	.10	.10¼
60 Gasoline	.10	.10¼	.10	.10¼	.10¼	.10½
62 Gasoline	.10¼	.10½	.10¼	.10½	.10½	.11
64 Gasoline	.10½		.10¼	.10½	.11	.11¼
68-70 350 endpoint gasoline	.12	.12½	.12½	.13	.12	.12½
CALIFORNIA—						
58-60 437 endpoint (U. S. Motor) domestic	.09	.10	.09	.10	.09	.10
CHICAGO DISTRICT (Based on Group 3)—						
50-52 450 endpoint (Naphtha)	.07½	.08	.07½	.08	.08	.08½
56-58 450 endpoint	.07¼	.07½	.07½		.07¾	.08
58-60 437 endpoint (U. S. Motor)	.07¼	.08	.07½	.08	.08	.08½
60-62 400 endpoint	.07¾	.08¼	.08	.08½	.08⅜	.08¾
64-66 375 endpoint	.08	.08½	.08¼	.08½	.08⅜	.09¼
68-70 360 endpoint	.08¼	.08¾	.08½	.08¾	.08⅞	.09⅜
64-66 437 endpoint (blend)	.07½	.08	.07¾	.08	.08⅛	.08½
GULF COAST (Export)—						
58-60 (U. S. Motor)	.08½		.08½		.08½	
60-62 400 endpoint	.09½		.09½		.09½	
61-43 390 endpoint	.09¾		.09¾		.09¾	
64-66 375 endpoint	.10		.10		.10	

*Louisiana, Arkansas, Mississippi and East Texas delivery.

NATURAL GASOLINE

OKLAHOMA (Group 3)—	July 30		July 23		July 16	
Grade A, 72-79.9, 375 e.p., rec. 90%	.06¼		.06¼	.06½	.06⅛	.06¼
Grade AA, 80-87.9, 375 e.p., rec. 90%	.06¼		.06¼	.06½	.06⅛	.06¼
Grade B, 76-83.9, 375 e.p., rec. 85%	.05¾	.05⅞	.05¾		.05½	.05¾
Grade BB, 84-92, 375 e.p., rec. 85%	.05¾	.05⅞	.05¾		.05½	.05¾
Grade C, 80-90, 375 e.p., rec. 78%	.05¾	.05⅞	.05¾		.05½	.05¾
NORTH TEXAS—						
Grade A, 72-79.9, 375 e.p., rec. 90%	.06¼		.06¼	.06½	.06⅛	.06¼
Grade AA, 80-87.9, 375 e.p., rec. 90%	.06¼		.06¼	.06½	.06⅛	.06¼
Grade B, 76-83.9, 375 e.p., 85%	.05¾		.05¾		.05½	.05¾
Grade BB, 84-92, 375 e.p., rec. 85%	.05¾		.05¾		.05½	.05¾
Grade C, 80-90, 375 e.p., rec. 78%	.05¾		.05¾		.05½	.05¾
NORTH LOUISIANA—						
Grade AA, 80-87, 375 e.p., rec. 90%	.06½		.06½		.06½	
Grade BB, 84-92, 375 e.p., rec. 85%	.06	.06¼	.06	.06¼	.06	.06¼
Grade C, 80-90, 375 e.p., rec. 78%	.06	.06¼	.06	.06¼	.06	.06¼
CALIFORNIA—						
75-78 375-390 endpoint	.08¾	.09¼	.08¾	.09¼	.08¾	.09¼
CHICAGO DISTRICT (Based on Group 3)—						
Grade A, 72-79.9, 375 e.p., rec. 90%	.06¼	.06½	.06¼	.06½	.06	.06¼
Grade AA, 80-87.9, 375 e.p., rec. 90%	.06¼	.06½	.06¼	.06½	.06	.06¼
Grade B, 76-83.9, 375 e.p., rec. 85%	.05¾	.06	.05¾	.06	.05½	.05¾
Grade BB, 84-92, 375 e.p., rec. 85%	.05¾	.06	.05¾	.06	.05½	.05¾
Grade C, 80-90, 375 e.p., rec. 78%	.05¾		.05¾		.05½	.05¾

BURNING OIL

OKLAHOMA (Group 3)—	July 30		July 23		July 16	
41-43 water white kerosene	.05⅛	.05½	.05¼	.05½	.05¼	.05½
42-44 water white kerosene	.05¾	.06	.05¾	.06	.05⅞	.06⅛
***NORTH LOUISIANA—**						
41-43 water white kerosene	.05½	.05¾	.05¾	.06¼	.06¼	.06½
NORTH TEXAS—						
41-43 water white kerosene	.04⅞	.05⅛	.05	.05⅛	.05	.05¼
40-42 water white kerosene	.04¾	.05	.04⅞	.05	.04⅞	.05
***ARKANSAS—**						
41-43 water white kerosene	.05½	.05¾	.05¾	.06	.06½	.06¾
PENNSYLVANIA—						
43 Kerosene prime white	.06	.06⅛	.06	.06⅛	.06	.06⅛
45 Kerosene water white	.06⅛	.06¼	.06⅛	.06¼	.06	.06¼
46 Kerosene water white	.06¼	.06¾	.06½	.06¾	.06½	.06¾
47 Kerosene water white	.06¾	.07	.06¾	.07	.06¾	.07
300 Mineral Seal	.06¾	.07	.06¾	.07	.07¼	.07½
CALIFORNIA—						
38-40 water white Kero. (high-burning test)	.05½	.06	.05½	.06	.05½	.06
Engine distillate, 43-44, 445 endpoint	.08	.08¾	.08	.08¾	.08	.08¾
Engine distillate, 42-44, 480 endpoint	.07½	.08¼	.07½	.08¼	.07½	.08¼
CHICAGO DISTRICT (Based on Group 3)—						
41-43 water white kerosene	.05⅛	.05½	.05¼	.05½	.05½	.05¾
42-44 water white kerosene	.05½	.05¾	.05¾	.06	.06	.06⅛
GULF COAST (Export)—						
41-43 prime white	.07		.07		.07	
41-43 water white	.08		.08		.08	

*Louisiana, Arkansas, Mississippi and East Texas delivery.

FUEL OIL

OKLAHOMA (Group 3)—	July 30		July 23		July 16	
Below 18 Fuel Oil, per bbl.	.45	.50	.45	.50	.45	.50
18-22 Fuel Oil, per bbl.	.50	.55	.50	.55	.50	.55
20-22 Fuel Oil, per bbl.	.55	.60	.55	.60	.55	.60
22-26 Fuel Oil, per bbl.	.60	.65	.60	.65	.60	.65
24-26 Fuel Oil, per bbl.	.65	.70	.65	.70	.65	.70
26-30 Fuel Oil, per bbl.	.77½	.82½	.77½	.82½	.77½	.82½
28-30 Fuel Oil, per bbl. (industrial)	.80	.85	.80	.85	.80	.85
32-36 Gas Oil (industrial)	.02⅜	.02½	.02⅜	.02½	.02⅜	.02½
32-36 Gas Oil (straw color)	.02½	.02¾	.02½	.02¾	.02½	.02¾
36-38 Distillate	.03	.03⅛	.03	.03⅛	.03	.03⅛
38-40 Straw Distillate	.03¼	.03½	.03¼	.03½	.03¼	.03½
NORTH TEXAS—						
Below 20 Fuel Oil	.60	.65	.60	.65	.60	.65
24-26 Fuel Oil, per bbl.	.65	.70	.65	.70	.65	.70
32-36 Gas Oil (straw)	.02½	.02¾	.02½	.02⅝	.02⅜	.02½
38-40 Straw Distillate	.03¼	.03½	.03¼		.03¼	
***NORTH LOUISIANA—**						
18-20 Fuel Oil, per bbl.	.75		.75		.75	
30-32 Gas Oil	.02½	.02¾	.02½	.02¾	.02¾	.03
***ARKANSAS—**						
33-36 Distillate	.03	.03¼	.03	.03¼	.03	.03¼
30-32 Gas Oil	.02¾	.03	.02¾	.03	.02¾	.03
16-22 Refinery Fuel Oil, per bbl.	.75		.75		.75	
GULF COAST (South Texas)—						
Gas Oil	.04		.04		.04	
Bunker C Fuel (cargo lots), per bbl.	.70	.80	.70	.80	.70	.80
Bunker C Fuel (small lots)	.90	.95	.90	.95	.90	.95
PENNSYLVANIA—						
30-34 Fuel Oil	.04⅛	.04¼	.04⅛	.04¼	.04⅛	.04⅜
36-40 Fuel Oil	.04⅜	.04½	.04⅜	.04½	.04½	.04¾
CALIFORNIA—						
33-36 Distillate	.04	.04½	.04	.04½	.04	.04½
26-32 Distillate	.03	.03½	.03	.03½	.03	.03½
15-20 Fuel Oil, Bunker (at tide water)	.65	.85	.65	.85	.65	.85
15-20 Fuel Oil (cargo lots), per bbl.	.70	.85	.70	.85	.70	.85
27 plus Diesel, per bbl.	.90	1.05	.90	1.05	.90	1.05
CHICAGO DISTRICT (Based on Group 3)—						
22-26 Fuel Oil, per bbl.	.62½	.67½	.62½	.67½	.62½	.67½
18-22 Fuel Oil, per bbl.	.50	.55	.50	.55	.47½	.52½
28-30 Fuel Oil	.90	.95	.90	.95	.90	.95
32-36 Gas Oil (zero)	.02⅝	.02¾	.02⅝	.02¾	.02⅝	.02¾
32-36 Gas Oil (industrial)	.02⅜	.02½	.02⅜	.02⅝	.02⅜	.02⅝
36-38 Distillate	.03¼	.03⅜	.03¼	.03⅜	.03¼	.03⅜
38-40 Straw Distillate	.03⅜	.03⅝	.03⅜	.03½	.03⅜	.03½

*Louisiana, Arkansas, Mississippi, East Texas delivery.

LUBRICATING OIL AND WAX

OKLAHOMA (Group 3)—	July 30		July 23		July 16	
100 vis., 2 color, 20-25 cold test	.06¾	.07	.06¾	.07	.06¾	.07
100 vis., 3 color, 20-25 cold test	.05¾	.06	.05¾	.06	.05¾	.06
150 vis., 3 color, 20-25 cold test	.07¾	.08	.07¾	.08	.07¾	.08
150 vis., 4 color, 20-25 cold test	.07¼	.07½	.07¼	.07½	.07¼	.07½
180 vis., 3 color, 23-28 cold test	.09¼	.09½	.09¼	.09½	.09¼	.09½
180 vis., 5 color, 23-28 cold test	.08½	.08¾	.08½	.08¾	.08½	.08¾
200 vis., 3 color, 23-28 cold test	.09¾	.10	.09¾	.10	.09¾	.10
200 vis., 4 color, 23-28 cold test	.09¼	.09½	.09¼	.09½	.09¼	.09½
200 vis., 5 color, 23-28 cold test	.08¾	.09	.08¾	.09	.08¾	.09
240 vis., 3 color, 25-30 cold test	.13¼	.13½	.13¼	.13½	.13¼	.13½
240 vis., 4 color, 25-30 cold test	.12¼	.12½	.12¼	.12½	.12¼	.12½
240 vis., 5 color, 25-30 cold test	.11¾	.12	.11¾	.12	.11¾	.12
280 vis., 3 col., 25-30 cold test	.15¾	.16	.15¾	.16	.15¾	.16
280 vis., 4 color, 25-30 cold test	.14¾	.15	.14¾	.15	.14¾	.15
280 vis., 5 color, 25-30 cold test	.13¾	.14	.13¾	.14	.13¾	.14
Cylinder Stocks:						
600, steam refined, light green	.14	.16	.14	.16	.14	.16
600, steam refined, dark green	.13	.14	.13	.14	.13	.14
190-200 vis., D color Bright Stock	.40		.40		.40	
150-160 vis., D color Bright Stock	.35	.36	.35	.36	.36	.36
150-160 vis., E color Bright Stock	.33		.33		.33	
Waxes:						
124-126 White Crude Scale Wax	.02½	.02⅝	.02½	.02⅝	.02½	.02⅝
PENNSYLVANIA—						
34 Neutral	.07½	.07¾	.07½	.07¾	.07½	.07¾
34 Sundebloom	.07¾	.08	.07¾	.08	.07¾	.08
36 Miners' Neutral	.07¼	.07½	.07¼	.07½	.07¼	.07½
150, 3 color	.20	.20¼	.20	.20¼	.20	.20¼
180, 3 color	.25	.25½	.25	.25½	.25	.25½
200, 3 color	.27	.27½	.27½	.28	.27½	.28
220, 3 color	.29½	.30	.29½	.30	.29½	.30
600, steam refined	.25½	.26	.27½	.28	.27½	.28
635, steam refined	.31½	.32	.31	.32	.31	.32
650, steam refined	.33	.34	.34	.35	.34	.35
600 Pennsylvania Flash	.33	.34	.37	.38	.37	.38
630, Pennsylvania Flash	.39	.40	.40	.40½	.40	.40½
600, E filtered	.33	.34	.34	.35	.34	.35
600, D filtered	.36	.37	.37	.38	.37	.38
Pennsylvania Bright Stock	.51	.52	.51	.52	.51	.52
*122-124 White Crude Scale Wax	.02¾	.02⅞	.02¾	.02⅞	.02¾	.02⅞
*124-126 White Crude Scale Wax	.02⅞	.03	.02⅞	.03	.02⅞	.03

*At New York.

GULF COAST (South Texas)—						
No. 2 color, 100 vis., pale oil	.06½	.07	.06½	.07	.06½	.07
No. 3 color, 200 vis., pale oil	.09½	.10	.09½	.10	.09½	.10

REFINERY AND CRUDE PRICES

Quotations on refined products are for interstate or export movement unless otherwise noted.

No. 3 color, 300 vis., pale oil	.10½	.10¾	.10½	.10¾	.10½	.10¾														
No. 3½ color, 500 vis., pale oil	.11¾	.12¼	.11¾	.12¼	.11¾	.12¼														
No. 4 color, 750 vis., pale oil	.13	.13½	.13	.13½	.13	.13½														
No. 5 to 6 color, 200 vis., red oil	.08½	.08¾	.08½	.08¾	.08½	.08¾														
No. 5 to 6 color, 300 vis., red oil	.09¾	.10¼	.09¾	.10¼	.09¾	.10¼														
No. 5 to 6 color, 500 vis., red oil	.10¾	.11½	.10¾	.11½	.10¾	.11½														
No. 5 to 6 color, 750 vis., red oil	.12	.12½	.12	.12½	.12½	.13														
No. 2½ color, 200 vis., pale filtered	.11	.12	.11	.12	.11	.12														
No. 2½ color, 300 vis., pale filtered	.12	.13	.12	.13	.12	.13														
No. 2½ color, 500 vis., pale filtered	.14½	.15	.14½	.15	.14½	.15														
No. 2½-3 color, 750 vis., pale filtered	.17	.19	.17	.19	.17	.19														
CALIFORNIA—																				
130 vis., 2½-3 color	.10¼	.10½	.10¼	.10½	.10¼	.10½														
200 vis., 2½-3 color	.11½	.11¾	.11½	.11¾	.11½	.11¾														
300 vis., 3-3½ color	.13	.13½	.13	.13½	.13	.13½														
350 vis., 3½-4 color	.13½	.13¾	.13½	.13¾	.13½	.13¾														
400 vis., 3½-4 color	.15	.15½	.15	.15½	.15	.15½														
Red Neutral:																				
200 vis., 4½-5 color	.11	.11¼	.11	.11¼	.11	.11¼														
300 vis., 5-6 color	.12	.12¼	.12	.12¼	.12	.12¼														
400 vis., 5-6 color	.13¼	.14	.13¼	.14	.13¼	.14														
500 vis., 4½-5 color	.14¼	.15½	.14¼	.15½	.14¼	.15½														
500 vis., 5-6½ color	.15	.15¼	.15	.15¼	.15	.15¼														
600 vis., 6½ plus color	.16	.16¼	.16	.16¼	.16	.16¼														

Note—Bright stocks are not manufactured commercially on the Pacific Coast.

NEW YORK (BAYONNE) REFINERY PRICES

	July 30		July 23		July 16	
Gasoline, U. S. Motor, 58-60, 437	.10	.11	.10	.11	.10	.11
Kerosene, water white, 41-43	.07¾	.08	.07¾	.08	.07¾	.08
*Fuel Oil, Bunker "C," 14-16, per bbl.	1.05		1.05		1.05	
†Fuel Oil, Diesel, 28-30, per bbl.	2.00		2.00		2.00	
Gas Oil, 32-36 gravity	.05¼		.05¼		.05¼	
25 pale Paraffin Oil	.10½		.10½		.10½	
28 pale Paraffin Oil	.07¼		.07¼		.07¼	
285 red Paraffin Oil	.11½		.11½		.11½	
250 red Paraffin Oil	.11		.11		.11	
225 red Paraffin Oil	.09½		.09½		.09½	
200 red Paraffin Oil	.09		.09		.09	
Refined Wax:						
120-122 a.m.p., per lb.	.03⅜		.03⅜		.03½	
125-127 a.m.p., per lb.	.03⅞		.03⅞		.04	
130-132 a.m.p., per lb.	.04⅜		.04⅜		.05	
133-135 a.m.p., per lb.	.06		.06		.06	
135-137 a.m.p., per lb.	.06¼		.06¼		.06⅜	
Petrolatum in barrels, carload lots, per pound:						
Dark green	.019		.019		.02	
Amber	.03⅝		.03⅝		.03½	
Extra amber	.03⅞		.03⅞		.03¾	
Cream	.06⅜		.06⅜		.06½	
Lily White	.07⅜		.07⅜		.07½	
Snow White	.08⅜		.08⅜		.08½	

*Lighterage 5.0 cents a barrel extra. †Lighterage 6.5 cents a barrel extra.

NEW YORK (BAYONNE) EXPORT PRICES

	July 30		July 23		July 16	
Kerosene, prime white	.08		.08		.08	
Kerosene, water white	.09		.09		.09	
600, steam refined cylinder stocks, in bbls.	.33	.37	.33	.37	.36	
635, steam refined	.35	.38	.35	.38	.38	
650, steam refined	.40	.43	.40	.43	.43	
600, Pennsylvania Flash	.47	.48	.47	.48	.48	
630, Pennsylvania Flash	.51		.51		.52	
600, Warren E	.42		.42		.43	
600, Oil City E	.41		.41		.42	
Light 140-150 Bright Stocks	.60		.60		.60	
Dark 140-150 Bright Stocks	.59		.59		.59	

LOS ANGELES EXPORT PRICES

	July 30		July 23		July 16	
Kerosene, water white	.05	.05½	.05	.05½	.05	.05½
U. S. Motor Gasoline, 53-55 437 e.p.	.07	.07½	.07	.07½	.07	.07½

CRUDE OIL PRICES

OKLAHOMA, KANSAS, NORTH AND EAST CENTRAL TEXAS

Corsicana heavy (January 11)* ..... .80
Other fields .....See gravity table

*Posted by Magnolia Petroleum Co.

TEXAS PANHANDLE

Gray County, Wheeler County and Carson-Hutchinson Counties—See gravity table.

WEST TEXAS

Iatan* .....Same as North Texas
Crane-Upton-Crockett, Pecos, Winkler, Mitchell, and Glasscock (See gravity table).
Chalk† ..... .65

*Includes Howard County and Westbrook Fields.
†Posted by Humble Oil & Refining Co.

ARKANSAS-NORTH LOUISIANA

Smackover, below 24 gravity (May 20, 1929) .....$ .85
Smackover, 24 gravity and above (May 20, 1929) 1.00
Cotton Valley (Below 36 gravity May 22) ..... .85
Bellevue (May 29, 1929) 1.30
Urania (May 21, 1929) 1.10
East El Dorado (May 22, 1929) ..... .85
Other fields .....See gravity table

Cotton Valley crude above 36 gravity takes same gravity price schedule as shown for North Louisiana and Arkansas crude in Mid-Continent gravity price table.

Note—Smackover, Cotton Valley and Bellevue posted by Standard Oil Co. of Louisiana, and Magnolia Petroleum Co.; Urania posted by Louisiana Oil Refining Corp.; East El Dorado, Magnolia Petroleum Co.

GULF COAST

Grade A (May 20)* $1.30
Grade B .....See gravity table
Jennings, La. (March 14)† 1.05
Saratoga, Batson, Dayton (March 14, 1927)‡ 1.20
Markham (March 14)‡ 1.00
High Island (December 14)¶ 1.00

*Humble Oil & Refining Co., The Texas Company, Gulf Pipe Line Co., and Sun Pipe Line Co. †Gulf Pipe Line Co. ‡Sun Pipe

(Continued on Page 134)

CRUDE OIL GRAVITY TABLE

Gravity—	1 Okla., Kans. N. C. Texas	2 No. La. and Arkansas	3 Crane, Upton, Crockett, Winkler, Howard, Pecos, Texas crudes, and Lea, N. Mex.	4 Stephens, Ark.	5 Wheeler (Texas Panhandle)	6 Gray County (Texas Panhandle)	7 Carson and Hutchinson (Texas Panhandle)	8 Salt Creek, Wyo.	9 Grade B and Light Crude (G. Coast)	10 Somerset (South Central Texas)
24 and above	....	....	....	....	....	....	....	....	....	....
Below 24	....	....	....	....	....	....	....	....	....	....
Below 25	.85	....	.70	....	....	....	....	....	1 15	....
25 to 25.9	.90	....	.74	....	....	....	....	....	1 18	....
26 to 26.9	.95	....	.78	....	....	....	....	....	1 21	....
27 to 27.9	1.00	....	.82	....	....	....	....	....	1 24	....
Below 28	....	1 00	....	.90	.90	.90	.90	....	....	....
28 to 28.9	1 05	1 05	.86	.94	.90	.90	.90	....	1 27	....
29 to 29.9	1 10	1 10	.90	.98	.90	.95	.90	1 10	1 30	....
30 to 30.9	1.15	1 15	.94	1.02	.95	1 00	.90	1 15	1 33	....
31 to 31.9	1.20	1 20	.98	1 06	1 00	1 05	.90	1 20	1.36	....
32 to 32.9	1.25	1.25	1 02	1.10	1 05	1 10	.95	1 25	1.39	1 05
33 to 33.9	1.30	1 30	1 06	....	1 10	1 15	1 00	1 30	1 42	1.07
34 to 34.9	1 35	1 35	1 10	....	1 15	1.20	1 05	1.35	1.45	1 09
35 to 35.9	1 40	1.40	1 14	....	1 20	1 25	1 10	1 40	1.48	1 11
36 to 36.9	1.45	1 45	1.18	....	1.25	1 30	1.15	1 45	....	1 13
37 to 37.9	1 50	1 50	....	....	1.30	1 35	1 20	1 50	....	1 15
38 to 38.9	1 55	1 55	....	....	1 35	1 40	1.25	....	....	1 17
39 to 39.9	1 60	1.60	....	....	1 40	1.45	1 30	....	....	....
40 to 40.9	1.65	1 65	....	....	1.45	1 50	1 35	....	....	....
41 to 41.9	1 70	1 70	....	....	1.50	1 55	1 40	....	....	....
42 to 42.9	1 75	1.75	....	....	1 55	1 60	1 45	....	....	....
43 to 43.9	1 80	1 80	....	....	1.60	1 65	1.50	....	....	....
44 and above	1.85	1.85	....	....	1.65	1.70	1.55	....	....	....

Column 1, Note—Magnolia Petroleum Co. posted schedule May 20, 1929, making price below 26 gravity 70 cents per barrel, 26-26.9 gravity 75 cents, 27-27.9 gravi y 85 cents, 28-28.9 gravity 90 cents, 29-29.9 gravity 95 cents, 30-30.9 gravity $1.05, and 31-31.9 gravity $1.15, with balance of the price schedule as shown above.

Oklahoma—Carter Oil Co., Prairie Oil & Gas Co., Sinclair Oil & Gas Co., Gypsy Oil Co., The Texas Company, May 20.

North Central Texas—Including Ranger, Mexia, Powell, Richland, Wortham, Lytton Springs, Currie, Nocona and Moran, Prairie Oil & Gas Co., Sinclair Oil Refining Co., Humble Oil & Refining Co., The Texas Company and Gulf Refining Co., May 20.

Kansas—Prairie, Sinclair, The Texas Company and Carter, May 20.

Column 2—Arkansas and Nor.h Louisiana—[Caddo, Bull Bayou, Crichton, Cotton Valley, above 36 gravity, DeSoto, Haynesville, Homer and El Dorado only] May 22, Standard Oil Co. of Louisiana, Louisiana Oil Refining Corp., Gulf Refining Co., Magnolia Petroleum Co., schedule applies to Pine Island, Haynesville, Bull Bayou, Louisiana and El Dorado, Ark., light crude.

Column 3—Humble Oil & Refining Co. and Magnolia Petroleum Co., May 20.

Column 4—Atlantic Oil Producing Co., Prairie Oil & Gas Co., Louisiana Oil Refining Corp., May 21, 1929.

Columns 5, 6 and 7—Humble Oil & Refining Co., Magnolia Petroleum Co., May 20, 1929.

Column 8—Midwest Refining Co., May 20, 1929. All crude over 37 gravity $1.50 per barrel

Column 9—Humble Oil & Refining Co., May 20, 1929 (schedule ends 35 and above).

Column 10—Grayburg Pipe Line Co. and Pioneer Oil & Refining Co., April 7.

CALIFORNIA CRUDE OIL PRICES

Standard Oil Co.-Union Oil Co. (Effective January 18, 1929)

Gravity—	1 Salt Lake, Potrero, Newport, Long Beach, Summerland, Lawndale, Los Angeles, Fullerton, Richfield, Torrance, Olinda-Brea, Alamitos Heights, Signal Hill, Seal Beach, Huntington Beach, Athens, Inglewood, Rosecrans-Dominguez, Watsonville	2 Whittier, La Habra, Coyote Hills	3 Midway-Sunset, Elk Hills, Lost Hills, Belridge, Buena Vista Hills	4 Montebello	5 Santa Fe Springs	6 Santa Maria, Coalinga	7 Wheeler Ridge, Fruitvale	8 Orcutt, Ventura, Rincon	9 Ventura Ave.	10 Elwood Terrace
14 to 14.9	.70	70	.50	70	....	.50	.50	.65	.70	....
15 to 15.9	.70	70	.50	70	....	.50	.50	.65	.70	....
16 to 16.9	.70	70	.50	70	....	.50	.50	.65	.70	....
17 to 17.9	.70	70	.50	70	....	.50	.50	.65	.70	....
18 to 18.9	.75	75	.56	70	....	.56	.56	.70	.75	....
19 to 19.9	.80	80	.62	75	....	.62	.62	.70	.80	....
20 to 20.9	.85	84	.68	80	....	.68	.68	.70	.85	....
21 to 21.9	.89	88	.74	85	.89	.74	.74	.86	.86	....
22 to 22.9	.93	91	.80	90	.92	.80	.80	.87	.87	....
23 to 23.9	.97	94	.85	95	.95	.85	.85	.90	.90	....
24 to 24.9	1.01	97	.90	98	.98	.88	.88	.94	.94	....
25 to 25.9	1 05	1 00	.95	1 01	1 01	.91	.91	.98	.98	....
26 to 26.9	1.09	1 04	1 00	1 04	1 04	.94	.94	1 02	1 02	....
27 to 27.9	1.13	1 08	1.05	1 07	1.07	.98	.97	....	1 06	....
28 to 28.9	1 17	1 12	1 10	1 10	1 10	1 02	....	....	1 10	....
29 to 29.9	1.21	1 16	1 16	1 13	1 15	1.06	....	....	1 14	....
30 to 30.9	1.25	1 20	1.22	1.16	1.20	1 10	....	....	1.18	....
31 to 31.9	1 30	....	1 28	....	1 25	1 14	....	....	1 23	....
32 to 32.9	1 35	....	1 34	....	1 30	1.18	....	....	1 28	....
33 to 33.9	1 41	....	1.40	....	1 35	1 22	....	....	1.34	....
34 to 34.9	1 47	....	1.46	....	1 40	1.26	....	....	1 40	1 16
35 to 35.9	1 53	....	....	....	1 45	1 30	....	....	1 46	1.22
36 to 36.9	1 59	....	....	....	1 50	....	....	....	1 52	1.28
37 to 37.9	1 65	....	....	....	1.55	....	....	....	1.58	1 34
38 to 38.9	1 71	....	....	....	1 60	....	....	....	1 64	1 40
39 to 39.9	1.77	....	....	....	1 65	....	....	....	1.70	1 46
40 to 40.9	1.83	....	....	....	....	....	....	....	1 76	1 52
41 to 41.9	1 89	....	....	....	....	....	....	....	1 82	1.58
42 to 42.9	1.95	....	....	....	....	....	....	....	1 88	1.64

Kern River, Newhall-McKittrick, Mount Poso and Round Mountain 11 to 13.9 gravity 45 cents, 14 gravity and above 50 cents, effective October 2, 1929. On December 1, 1928, the Union Oil Co. posted Midway-Sunset, Elk Hills, Buena Vista, Los. Hills and Coalinga crude as follows: 11 to 13.9 gravity at 45 cents, 14 gravity and above 50 cents.

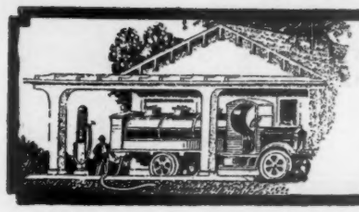
Column 1—Signal Hill, Seal Beach, Huntington Beach and Alamitos Heights crude, 14 to 32.9 gravity, inclusive; Richfield, Olinda-Brea and Fullerton, 14 to 30.9 gravity; Torrance and Inglewood, 14 .o 28.9 gravity; Dominguez and Athens-Rosecrans, 24 to 42.9 gravity.

Column 2—Whittier crude, 14 to 22.9 gravity; Coyote Hills, 14 to 30.9 gravity.

Column 3—Kern River, Newhall and McKittrick, 11 to 19.9 gravity; Midway-Sunset, Buena Vista and Elk Hills, 11 to 33.9 gravity; Lost Hills, 11 to 34.9 gravity; oil below 14 gravi y posted at 45 cents.

Column 6—Oil below 14 gravity posted at 45 cents.

Columns 8 and 9—Posted by Union Oil Co. only.



TANK WAGON MARKETS

Tank wagon quotations for gasoline and kerosene in United States as furnished by the larger marketing concerns July 30.

ALL TANK WAGON AND SERVICE STATION QUOTATIONS INCLUDE TAXES

STANDARD OIL CO. (INDIANA)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Chicago dist.†..	16.0	17.0	...	13.0
Decatur, Ill. ...	16.2	17.2	...	13.1
E. St. Louis ...	15.4	16.4	...	12.2
Joliet	16.4	17.4	...	13.3
Peoria	16.2	17.2	...	13.1
Quincy	16.2	17.2	...	12.9
Davenport, Ia..	19.5	20.5	3.0	13.3
Des Moines ...	19.5	20.5	3.0	13.3
Keokuk	19.5	20.5	3.0	13.3
Sioux City	19.1	20.1	3.0	12.9
Duluth, Minn..	20.5	21.5	3.0	13.9
Mankato	20.1	21.1	3.0	13.7
Minneapolis ...	20.2	21.2	3.0	13.9
LaCrosse, Wis..	19.2	20.2	3.0	14.0
Milwaukee	18.1	19.1	3.0	13.9
Madison	17.3	18.3	3.0	13.1
Detroit, Mich...	19.8	20.8	3.0	14.7
Grand Rapids..	19.7	20.7	3.0	14.6
Saginaw	19.9	20.9	3.0	14.8
Evansville, Ind.	20.0	21.0	4.0	14.0
Fort Wayne ...	20.4	21.4	4.0	14.4
Indianapolis ...	20.2	21.2	4.0	14.2
South Bend ...	20.4	21.4	4.0	14.4
Fargo, N. D. ..	21.9	22.9	3.0	15.9
Huron, S. D. ..	21.3	22.3	4.0	14.7
Sioux Falls ...	20.1	21.1	4.0	14.4
K. C., Mo.* ...	18.9	19.9	3.0	11.6
Springfield* ...	18.8	19.8	3.0	12.5
St. Louis*	17.9	18.9	2.5	12.3
St. Joseph	18.5	19.5	2.0	12.0
Wichita, Kans..	17.8	18.8	3.0	11.8
Bartlesville, Ok.	18.5	19.5	4.0	11.5

*State tax 2 cents; remainder city tax.
†Effective February 20, discounts on Q.D.A. in Chicago district 2 cents off service station price on purchases of 500 gallons or more per month and 4 cents on purchases of 1,000 gallons or more per month.

NAPHTHA

	Tank wagon	Tank car
Oleum spirits	15.7	12.9
V. M. & P. Naphtha	17.2	13.9
Cleaner's naphtha	17.0	14.9
Stanisol	18.0	15.4

Tank wagon prices f.o.b. Chicago; tank car prices f.o.b. Whiting.

STANOLIND FURNACE OIL IN CHICAGO

Less than 100 gallons	9.0
100 to 799 gallons	8.0
800 gallons or more	7.5

Note—Outside Chicago furnace oil discount of 1 cent per gallon is given on deliveries of 100 to 349 gallons and 1½ cents on deliveries of 350 gallons or more.

The following quantity discounts from the service station price are allowed on monthly sales of gasoline; 2,000 gallons or less, 2 cents; more than 2,000 and less than 6,000 gallons, 2½ cents; more than 6,000 gallons, 3 cents. Discounts are allowed each month, and they are not cumulative. Delivery tickets showing date and quantity delivered must be sent to the seller before the tenth of the month to secure the discount on the previous month's purchases.

SOUTHWESTERN DISTRICT

Magnolia Petroleum Co.

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Dallas, Tex. ...	17.0	21.0	4.0	13.0
Fort Worth ...	17.0	20.0	4.0	12.0
Houston	17.0	21.0	4.0	13.0
San Antonio ...	17.0	21.0	4.0	11.0
El Paso	17.0	21.0	4.0	16.0
Texarkana	17.0	21.0	4.0	12.0
Muskogee, Ok.*	17.0	20.0	4.0	13.0
Okla. City* ...	17.0	20.0	4.0	10.0
Tulsa*	15.0	19.0	4.0	10.0
Ft. Smith, Ark.	16.0	20.0	5.0	12.0
Little Rock ...	20.0	24.0	5.0	13.0

*Gasoline tank wagon price to dealers 2 cents under posted tank wagon.

ROCKY MOUNTAIN DISTRICT

Continental Oil Co.

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Denver, Colo...	18.0	21.0	4.0	15.5
Pueblo	18.0	21.0	4.0	15.5
Grand Junction	22.5	25.5	4.0	19.0
Casper, Wyo. ..	21.0	24.0	4.0	14.0
Cheyenne	22.0	25.0	4.0	15.5
Butte, Mont. ..	25.5	28.5	5.0	20.0
Helena	25.5	28.5	5.0	20.0
Salt Lake, Utah	22.0	25.0	3.5	17.0
Albu'que, N. M.	21.0	24.0	5.0	17.0
Boise, Idaho ..	24.5	27.5	4.0	19.0
Twin Falls	24.5	28.5	4.0	19.0

PENNSYLVANIA—DELAWARE AND PART NEW ENGLAND

The Atlantic Refining Co.

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Pittsburgh, Pa..	17.0	*23.0	...	14.0
Philadelphia ..	17.0	*23.0	...	14.0
Scranton	17.0	*23.0	...	14.0
Allentown	17.0	*23.0	...	14.0
Altoona	17.0	*23.0	...	14.0
Erie	14.0	*19.0	...	14.0
Dover, Del. ...	20.0	22.0	3.0	14.0
Wilmington ...	20.0	22.0	3.0	14.0
Springf'd, Mass.	18.0	20.0	2.0	15.0
Worcester	17.0	18.0	2.0	15.0
Boston	18.0	20.0	2.0	15.0
Providence, R.I.	16.0	17.0	2.0	15.0
Hartford, Conn.	18.0	20.0	3.0	14.0
New Haven ...	18.0	20.0	2.0	15.0

*Includes tax of 4.0 cents. Pennsylvania tax is collected by the dealer and paid by him direct to the State. The Atlantic Refining Co. recognizes a 2-cent per gallon discount on gasoline from its posted tank wagon markets on sales to dealers for purposes of resale. The Atlantic Refining Co. also recognizes a maximum discount of 2 cents per gallon on gasoline to commercial accounts under contract for one year.

NEW YORK AND PART OF NEW ENGLAND DISTRICT

Standard Oil Co. (New York)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Albany, N. Y...	18.0	20.0	2.0	15.0
New York* ...	19.0	21.0	2.0	15.0
Buffalo	18.0	20.0	2.0	14.0
Rochester	18.0	20.0	2.0	14.0
Syracuse	18.0	20.0	2.0	15.0
Boston, Mass...	18.0	20.0	2.0	15.0
Augusta, Me....	20.0	22.0	4.0	15.0
Manch't'r, N.H.	20.0	22.0	4.0	15.0
Burlington, Vt..	19.0	20.0	4.0	15.0

*Prices in steel barrels.

SOUTHERN DISTRICT

Standard Oil Co. (Kentucky)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Atlanta, Ga. ...	20.0	22.0	4.0	16.5
Augusta	20.0	22.0	4.0	15.5
Macon	22.0	24.0	4.0	16.5
Savannah	21.0	23.0	4.0	15.5
Birm'ham, Ala..	20.0	22.0	4.0	16.0
Mobile	22.0	24.0	4.0	15.0
Montgomery ...	23.0	25.0	4.0	16.5
Clarks'le, Miss..	20.0	22.0	5.0	12.5
Jackson	22.0	24.0	5.0	13.0
Natchez	21.5	23.5	5.0	14.0
Gulfport	23.5	25.5	5.0	14.0
Vicksburg	21.5	23.5	5.0	14.0
Jack'ville, Fla..	23.0	25.0	6.0	14.5
Miami	24.0	26.0	6.0	15.5
Pensacola	24.0	26.0	6.0	14.5
Tampa	23.0	25.0	6.0	14.5
Lexington, Ky..	21.0	22.0	5.0	15.5
Covington	21.0	22.0	5.0	15.5
Louisville	21.0	23.0	5.0	15.0
Ashland	18.0	19.0	5.0	15.5
Catlettsburg ..	18.0	19.0	5.0	15.5

In addition to the state tax of 4 cents on gasoline, Montgomery has city tax of 1 cent on gasoline and one-half cent on kerosene. Kerosene prices in Georgia include 1-cent tax. In Florida, an inspection fee of 0.125 cent; in Alabama, an inspection fee of one-half cent on kerosene and one-fourth cent on gasoline. Pensacola and Mobile taxes include 1-cent city levy. Gulfport tax includes privilege tax of 2 cents in addition to state tax.

Effective April 2, price to dealers 2 cents under posted tank wagon price.

PACIFIC COAST TERRITORY

Standard Oil Co. (California)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
San Francisco.	20.0	24.0	3.0	15.5
Los Angeles ..	19.5	23.5	3.0	15.5
Reno, Nev.	24.0	26.0	4.0	19.0
Portland, Ore ..	20.5	24.5	3.0	16.5
Seattle, Wash..	19.5	23.5	3.0	16.5
Tacoma	19.5	23.5	3.0	16.5
Spokane	23.5	27.5	3.0	20.5
Phoenix, Ariz...	18.0	22.0	4.0	20.5

NEBRASKA

Standard Oil Co. (Nebraska)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Omaha	20.25	22.25	4.0	13.25
McCook	21.75	23.75	4.0	14.75
Norfolk	20.75	22.75	4.0	13.75
N. Platte	21.75	23.75	4.0	14.50
Scottsbluff	21.75	23.75	4.0	14.25

ATLANTIC COAST DISTRICT

Standard Oil Co. (New Jersey)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Atlantic City ..	14.0	18.0	2.0	13.0
Newark, N. J...	16.0	20.0	2.0	13.0
Annapolis, Md..	18.0	22.0	4.0	13.0
Baltimore	18.0	22.0	4.0	13.0
Cumberland ...	18.0	22.0	4.0	13.0
Washington ...	16.0	20.0	2.0	12.0
Danville, Va. ..	19.0	23.0	5.0	12.0
Norfolk	19.0	23.0	5.0	13.0
Petersburg	19.0	23.0	5.0	13.0
Roanoke	18.0	21.0	5.0	13.0
Richmond	19.0	23.0	5.0	13.0
Charles'n, W.Va.	18.0	22.0	4.0	13.0
Keyser	18.0	22.0	4.0	13.0
Parkersburg ...	18.0	22.0	4.0	13.0
Wheeling	18.0	22.0	4.0	13.0
Charlotte, N. C.	19.0	23.0	5.0	13.0
Hickory	19.0	23.0	5.0	13.0
Mt. Airy	19.0	23.0	5.0	13.0
Salisbury	19.0	23.0	5.0	13.0
Charleston, S.C.	20.0	24.0	6.0	13.0
Columbia	20.0	24.0	6.0	13.0

OHIO

Standard Oil Co. (Ohio)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Ohio points* ..	19.0	20.0	4.0	†13.0

*Dealers and commercial accounts 2 cents under tank wagon.
†Service station price 15 cents.

CENTRAL SOUTH DISTRICT

Standard Oil Co. (Louisiana)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
N. Orleans, La.*	17.5	21.5	5.0	16.0
Baton Rouge ..	17.0	21.0	4.0	14.5
Alexandria	18.0	22.0	4.0	16.0
Lafayette†	19.0	23.0	5.0	14.0
Lake Charles†..	19.5	23.5	5.0	16.0
Shreveport	18.5	22.5	4.0	15.0
Knoxv'le, Tenn.	20.0	24.0	5.0	16.0
Memphis	18.0	22.0	5.0	12.5
Chattanooga ..	21.5	25.5	5.0	16.0
Nashville	19.0	23.0	5.0	16.0
Bristol	22.0	25.0	5.0	14.0
Lit. Rock., Ark.	20.0	24.0	5.0	13.0

*Tax of 5 cents includes city tax of 1 cent. Louisiana Kerosene prices include 1-cent state tax and 1-cent parish tax.
†Includes 1-cent parish tax.

TANK WAGON CHANGES

July 13—Standard Oil Co. of Kentucky reduced gasoline tank wagon and service station prices 2 cents at Augusta, Ga.

July 23—Standard Oil Co. of Kentucky reduced gasoline tank wagon and service station prices 2 cents at Birmingham, Ala. Same company reduced gasoline service station price 1 cent at Lexington, Ky.

July 24—Standard Oil Co. of Kentucky reduced gasoline tank wagon and service station prices 2 cents at Clarksdale, Miss. Standard Oil Co. of New York advanced gasoline tank wagon and service station prices 1 cent in upper New York establishing price of 16 cents tank wagon and 18 cents service station exclusive of 2-cent tax.

July 20—Standard Oil Co. of Indiana reduced gasoline tank wagon and service station prices 1 cent at Fort Madison, Wis.

July 26—Standard Oil Co. of Louisiana reduced gasoline tank wagon and service station prices 1 cent at New Orleans, La. Standard Oil Co. of Ohio reduced gasoline tank wagon and service station prices 1 cent in Ohio. Same company reduced kerosene tank wagon and service station prices 1 cent in Ohio.

ENGINEERS WILL HOLD EXPOSITION MEETING

The fall meeting of the American Petroleum Institute Division of Development and Production Engineering, Mid-Continent district, will be held October 7 and 8, at the sixth International Petroleum Exposition and Congress, according to J. R. McWilliams, district chairman.

Methods and results obtained by repressuring in the Mid-Continent area will feature in the sessions. A complete program is expected to be ready for announcement by September.

Verbatim reports on the meeting will be available to all who register.

CRUDE OIL PRICES

(Continued from Page 133)

Line Co. ‖The Texas Company.
¶Posted by Gulf Pipe Line Co.

ROCKY MOUNTAIN STATES
Ohio Oil Co.-Midwest Refining Co.
(Effective May 21, 1929)

Rock Creek, Wyo.	$1.40
Salt Creek	See gravity table
Big Muddy	1.42
Grass Creek, heavy (July 27, 1928)	.90
Grass Creek, light	1.65
Mule Creek	1.20
Elk Basin	1.65
Lance Creek	1.68
Poison Spider (March 14, 1927)	1.00
Notches (March 14, 1927)	.65
Rex Lake (February 22)	1.10
Osage	1.65
Lost Soldier (contract, May 22)	1.05
Hamilton Dome (March 14, 1927)	.85
Pedro	1.25
Greybull	1.65
Four Bear	.85
Cat Creek (Montana) (July 27, 1928)..	1.48
Sunburst (Montana) (May 23, 1929)	1.75
Torchlight	1.65
Hogback (New Mexico)	1.70

Note—Salt Creek, Osage, Cat Creek, Greybull and Hogback posted by Midwest Refining Co., and the remainder by the Ohio Oil Co. Both companies post Grass Creek light and Elk Basin.

SOUTH CENTRAL AND SOUTHWESTERN TEXAS

Luling (May 2)*	$ .90
Mirando (May 20, 1929)†	.90
Salt Flat (May 20, 1929)‖	1.25
Rockdale-Minerva (April 15):	
Below 28 gravity	1.25
28-38.9 gravity	1.27
39-39.9 gravity	1.29
40 and above	1.31
Thrall‡	...
Callihan (May 15)	1.75
Lytton Springs (Lockhart)	See gravity table
Somerset	See gravity table

*Posted by Magnolia Petroleum Co.
†Magnolia Petroleum Co., Humble Oil & Refining Co., Crown Central Pipe Line Co.
‡Thrall prices same as North Central Texas less 19½ cents per cwt. freight.
‖Humble Oil & Refining Co.

EASTERN STATES
Joseph Seep Purchasing Agency
(Effective July 16, 1929)

Penna Grade Oil in New York Transit Lines (New York)	$3.80
Bradford District Oil in National Transit Lines (Pennsylvania)	3.80
Penna Grade Oil in National Transit Lines (Pennsylvania)	3.80
Penna Crude Oil in Southwest Pennsylvania Lines (West Virginia)	3.75
Penna Grade Oil in Eureka Pipe Line Lines (Pennsylvania)	3.65
Penna Grade Oil in Buckeye Pipe Line Lines (Ohio)	3.50
Cabell Grade Oil in Eureka Pipe Line Lines (West Virginia) (May 24, 1929)	1.75
Corning 35-cent Grade Oil in Buckeye Pipe Line Co.'s Line (May 22, 1929).	1.80
Corning 35-cent Grade Oil in Buckeye Pipe Line Co.'s Lines (May 22, 1929)	1.90
Somerset Oil in Cumberland Pipe Line Lines (Kentucky) (May 22, 1929)	1.80
Ragland Grade Oil in Cumberland Pipe Line Lines (Kentucky) (Jan. 29)	.60

MIDDLE WESTERN STATES
Ohio Oil Co.
(Effective May 21, 1929)

Lima	$1.80
Wooster	1.90
Illinois	1.75
Indiana	1.87
Princeton	1.75
Plymouth	1.88
Waterloo (November 17, 1926)	1.85
Western Kentucky	1.82
Dundee, Mich. (June 26, 1929)‖	1.25
Upper and Lower Traverse sands, Mich.‖	Same as Mid-Continent gravity scale
Midland, Mich. (June 3, 1929)*	1.70
Saginaw, Mich., Saginaw Sand (February 10)†	1.89
Saginaw, Mich., Berea Sand (February 10)†	1.79
Cumberland, Clay, Barren, Clinton and Monroe Counties, Kentucky, (March 15)‡	1.50
Oil in line in Stoll Oil Refining Co. in Oil City, Ky. (June 1, 1929)‖	1.80
Oil Springs (Canada)¶	2.37
Petrolia (Canada)¶	2.30

*Posted by Pure Oil Co.
†Posted by Sun Oil Co.
‡Posted by Paragon Development Co.
§Posted by Stoll Oil Refining Co.
‖Posted by Imperial Oil Co., Ltd.
¶Posted by Standard of Indiana for boat shipment.

MEXICAN CRUDE

Panuco (May)*	$ .65

*Based on June transactions. Price exclusive of taxes.

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MOTOR OIL

Indiana to Purchase Pan-American

Stockholders Will Vote on Increase of Capital to $450,000,000. Statement Issued by President Seubert

At a meeting of the directors of the Standard Oil Co. of Indiana it was resolved to complete the purchase of the Pan-American Petroleum & Transport Co., by acquiring the outstanding stock not already owned by the Standard Oil Co. of Indiana. A meeting of the stockholders of the Indiana company will be called for August 27, at which time a recommendation will be made to the stockholders that the capital stock be increased from $375,000,000 to $450,000,000, and that so much as may be necessary of this stock to acquire the outstanding stock of the Pan-American Co., be exchanged for the stock of the latter organization at the ratio of 7 shares of Standard Oil Co. of Indiana stock for 6 shares of the Pan-American stock.

The Pan-American Petroleum and Transport Co. has outstanding 1,000,000 shares with a par value of $50 each, of class A or voting stock. The Standard Oil Co. now owns a controlling interest in this stock. The Pan-American also has outstanding 2,422,041 shares of class B stock with a par value of $50 each. The combination of the two companies in one great organization will make the Standard Oil Co. of Indiana one of the outstanding world oil companies. Through the Pan-American Petroleum Co., large interests will be secured in Mexico and Venezuela, where the Mexican Petroleum Co. and the Lagos Oil & Transport Co. of Venezuela, are controlled by the first named oil company.

In making the announcement of the proposed plan President Seubert said: "The Standard Oil Co. of Indiana today owns about 15 per cent of the Pan-American stock, and by reason of its ownership of class A, or voting stock, it controls the company and is responsible for its success. In the discharge of that responsibility the Standard Oil Co. of Indiana has furnished large sums of money and experienced manpower to assist in expanding and improving the company's properties. To continue the expansion and development of the Pan-American activities for years to come will require more capital and more men, both of which the Standard Oil Co. can supply as needed, the result of which should assist Pan-American to greater earnings. The directors of the Standard Oil Co. believe that the interests of both companies can be best conserved and promoted by a closer union and identity of ownership of both companies, and have determined on what they believe to be a fair basis of exchange. The Pan-American stockholders who make the exchange, will, of course, through ownership of Indiana stock, which has paid dividends for over 30 years, enjoy the benefit of a dividend paying stock and share in the future prospect of Pan-American development."

The statement is made by executives of the company that the plan of procedure after the stock ownership is completed will not involve any change of name or union of the material interests. Both companies will be operated along the same mutual lines as at present in the joint relationship of the Standard Oil Co. of Indiana and the Midwest Refining Co., of which the former owns more than 99 per cent of the outstanding stock. The same executives state that the first six months of 1929 showed a material gain by the Standard company, both in business and earnings, and that with a continuation of the business on the same level the year will be a banner one for the Standard Oil Co. of Indiana.

Skelly Oil

Skelly Oil Co.'s net earnings for the first six months of 1929, after all charges, were $3,198,936.65, equal to $2.93 per share on the 1,089,857 6-10 shares outstanding. This, the report states, was the best first half-year in the company's history and compares with $456,344.83 for the first six months of 1928, equal to 42 cents per share.

Rio Grande Oil

Rio Grande Oil Co. reports for quarter ended June 30, 1929, net profit of $1,759,037, after interest, depreciation, depletion and federal taxes, equivalent to $1.44 a share on 1,218,000 no-par shares of stock. This compares with $1,123,325 or $1.05 a share on 1,200,000 shares in preceding quarter. Net profit for first six months of 1929 totaled $3,022,362 after above charges, equal to $2.49 a share on 1,218,000 shares.

Transcontinntal Oil

Transcontinental Oil Co. reports for quarter ended June 30, 1929, profit of $1,188,271 after interest, depreciation, dry holes, leases and properties abandoned charged off or provided for by reserve, but before federal taxes, comparing with $527,551 in preceding quarter and $493,612 in June quarter of 1928. Profit for first six months of 1929, totaled $1,715,822 before federal taxes against $422,966 in first half of previous year.

Barnsda'l Corp.

Barnsdall Corp. and subsidiaries report for quarter ended June 30, 1929, net income of $2,226,881 after interest, depreciation, depletion, abandoned dry holes and federal taxes, equivalent to 99 cents a share (par $25) earned on 2,247,425 shares of stock. This compares with $1,888,372 or 83 cents a share on 2,258,113 shares in preceding quarter and $614,196 or 49 cents a share on 1,251,000 shares in June quarter of 1928.

For first six months of 1929, net income totaled $4,115,253 after above charges, equal to $1.83 a share on 2,247,425 shares against $1,003,327 or 80 cents a share on 1,251,000 shares in first half of previous year.

Illinois Pipe

Gauged by its deliveries of oil, Illinois Pipe Line Co.'s earnings in the first six months of this year were approximately at the same rate as last year's period, says the Wall Street Journal. The company does not submit quarterly or semi-annual statements of earnings, but only a balance sheet at the end of each year. Additions to surplus account for the year 1928, after payment of dividends amounting to $16 a share on the 200,000 shares of $100 par stock outstanding, were equivalent to $5.58 a share, which indicated earnings of $21.58 a share, against $19.06 on the same basis in 1927.

Total deliveries of crude oil by the company, principally through its line running from Yates Pool, West Texas, to Del Rio, were 5,893,469 bbls., against 5,878,140 bbls. for the first six months last year. For the full year 1928 the company's deliveries totaled 11,958,740 bbls., indicating an aggregate of 6,080,600 bbls. in the latter half of last year.

The appended table gives the deliveries of Illinois Pipe Line Co. for the first six months of 1929 and 1928 (in bbls.):

	1929	1928
June	1,129,052	948,230
May	1,066,425	1,266,977
April	983,895	988,848
March	999,693	1,120,012
February	791,048	799,021
January	923,356	755,052
Totals	5,893,469	5,878,140

On July 1 the allotted production of Yates Pool in West Texas was increased by 30,000 bbls. a day to 130,000. Under the new allotment, the Illinois Pipe Line Co. is permitted to run 46,651 bbls. of oil daily. The increased proration, which will be in effect to December 31 unless there is a concerted movement to bring about a revision, should have a corresponding reflection in earnings of the company over the remainder of this year.

Twenty Representative Stocks

The Oil and Gas Journal's weekly average price of 20 representative petroleum stocks listed on the New York Stock Exchange and New York Curb, based on closing quotations for Saturday, was as follows:

Feb. 23	54.92	May 18	59.30
March 2	56.43	May 25	57.73
March 9	55.96	June 1	56.45
March 16	58.63	June 8	58.37
March 23	58.52	June 14	57.76
March 30	58.57	June 21	56.76
April 6	58.26	June 28	56.70
April 13	58.52	July 5	56.52
April 20	58.46	July 12	55.69
April 27	58.34	July 19	56.83
May 4	59.13	July 26	55.62
May 11	59.75		

Mid-Continent Petroleum

Mid-Continent Petroleum Corp. and subsidiaries report for quarter ended June 30, 1929, profit of $3,866,407 after interest, amortization, abandoned and surrendered leaseholds, but before depreciation, depletion and federal taxes comparing with $2,120,991 in preceding quarter and $2,216,275 in June quarter of 1928. Profit for first six months of 1929 totaled $5,987,398 before depeciation, depletion and federal taxes aganist $3,248,666 in first half of previous year. Stock outstanding amounts to 1,857,912 no-par shares.

Beacon Oil

Beacon Oil Co. reports for quarter ended June 30, 1929, profit of $390,031 after interest and depreciation, but before federal taxes, comparing with $140,477 in preceding quarter and $550,387 in June quarter of 1928. Profit for first six months of 1929, totaled $530,509 before federal taxes, against $141,467 in

INDEPENDENT OILS ON NEW YORK CURB

Compiled by Francis, Bro. & Co., Kennedy Building, Tulsa, Okla.

1926 High	1926 Low	1927 High	1927 Low	1928 High	1928 Low	1929 High	1929 Low	Par value	Stocks	For Week Ended July 26 Sales	Open	High	Low	Last	Chg.
$6.75	.45	2 7/8	.55	1 1/2	.53	.72	3/8	$5	Amer. Con. Oilfields	1,300	7/16	7/16	3/8	1/2	+ 1/8
..	..	7 1/2	2 3/4	9 1/2	3 1/8	8 5/8	3 1/2	N.P.	Amer. Maracaibo	5,200	4 1/2	5 5/8	4	4	+ 1/8
..	..	2 3/4	1	4 1/2	2 1/4	5	1 7/8	$10	Argo Oil	200	2	2 1/8	2	2 1/8	+ 1/2
85 1/4	60	40	20 1/2	55	32 3/4	62	45	N.P.	British American	No sales					
28 3/8	9 1/4	28 1/4	15 1/2	4 1/2	3 7/8	4 7/8	2 5/8	25c	Carib. Syndicate (new)	3,100	4	4	3 1/2	3 5/8	— 3/8
..	..	58 3/4	40 1/4	90 7/8	54	47	28 1/8	$20	Cities Service	120,800	43 7/8	46..	43 7/8	46 1/4	+ 5 1/2
..	..	95 3/8	87	103 1/2	94 1/2	98 3/4	93 1/2	100	Cities Service, pfd.	200	93	93 7/8	93	93 7/8	— 3 1/2
..	..	8 7/8	7 3/8	9 5/8	8 7/8	9 1/4	9	10	Cities Service, pfd. B	700	9	9	9	9	....
3 1/2	1 3/4	3 7/8	1 1/8	3 1/4	.76	2	7/8	1	Colombia Syndicate	9,400	7/8	1 3/4	7/8	1	+ 1/8
..	..	9 1/4	6 3/8	8 7/8	6 1/4	11 1/8	6 7/8	10	Consolidated Royal	100	6 3/8	6 3/8	6 3/8	6 3/8	— 1/8
16	10	14 7/8	9 1/2	17 1/2	9 1/2	11 3/4	7 7/8	N.P.	Creole Syndicate	8,900	8	8	7 1/2	7 3/4	— 3/8
..	..	3	.50	3 1/4	.76	2 1/2	1 1/8	N.P.	Crown Central	6,300	1 1/4	1 1/2	1 1/4	1 1/4	— 1/8
7 7/8	6 3/4	12	4	33 1/2	3 1/4	26	14	N.P.	Darby Petroleum	800	15	15	14	14	—1
..	..	2 1/2	74	2 1/4	1	11	2	N.P.	Derby Oil & Ref.	2,100	9 1/8	9 1/2	8 1/4	9	— 1/4
..	..	16 3/4	4	21 1/8	7 1/2	44	20 7/8	N.P.	Derby Oil & Ref., pfd.	No sales					
..	..	2	.40	.53	.15	..	..	N.P.	Gilliland ctfs.	No sales					
98	92	118	86 1/4	165	101 1/8	202 7/8	142 1/8	$25	Gulf Oil Corp.	5,600	191 7/8	193 3/4	185	187	—9
$3.00	.83	2 1/2	.80	3 3/8	1	2 7/8	1 1/4	5	Intercontinental Pet.	3,700	1 1/4	1 3/8	1 1/4	1 3/8	+ 1/8
..	..	2 1/4	1 1/8	3	1 1/4	3 5/8	1 3/4	N.P.	Kirby Petroleum	4,800	1 3/4	2 1/2	1 3/4	2 1/4	+ 1/2
12 1/4	5 3/4	10 7/8	5 1/8	9 3/8	5 1/8	6 1/8	2 7/8	25	Leonard Oil & Dev.	9,900	5 1/4	5 1/2	4 7/8	5	+ 1/4
27	20	27 1/2	20	43 7/8	20	38 7/8	23 1/8	N.P.	Lion Oil & Ref. Co.	No sales					
46	30	59 3/8	37	69 1/8	48 1/2	40	32 1/4	$25	Lone Star Gas	700	39	39	37 1/2	38	+ 3
2 7/8	1	2 7/8	.80	1 7/8	.50	1 1/4	3/8	1	Magdalena Syndicate	600	7/16	7/16	3/8	3/8	....
34	12 1/2	52	12	48 1/2	32	38 1/2	20	N.P.	Margay Oil	No sales					
8	5 1/2	12 1/8	5	8	2 3/4	6 3/8	3 3/8	N.P.	Mexico-Ohio Oil	No sales					
1 3/4	1 1/8	1 1/2	1	1 3/4	.76	1 1/2	7/8	$1	Mountain & Gulf	400	7/8	7/8	7/8	7/8	....
26	23	29 1/4	22 3/4	28 7/8	19 1/2	22 7/8	12	10	Mountain Producers	4,700	12 1/2	13	12 1/2	12 1/2	+ 1/4
6 5/8	5	5 7/8	4 5/8	5 5/8	4 1/4	5	3 3/8	5	New Bradford	600	3 1/4	3 5/8	3 1/4	3 5/8	+ 1/4
..	..	16	9 1/4	11 7/8	7 1/8	9 3/8	5 1/2	1	New Mex. & Ariz.	100	5 5/8	5 5/8	5 5/8	5 5/8	— 3/8
..	..	12 3/4	9 1/2	14 1/4	8 1/2	11 7/8	3 3/4	N.P.	North Central Texas	20,600	12	18 3/8	12	17 3/4	+ 6 5/8
10 1/8	5 7/8	9 3/8	3 1/4	6	2 1/8	3 1/2	1 3/8	N.P.	Pandem	800	1 5/8	1 5/8	1 3/8	1 5/8	+ 1/8
12 1/4	11 3/4	12 1/8	7	15 5/8	8 1/2	10 1/4	5 7/8	N.P.	Pantepec Oil	2,700	6 1/4	6 1/4	6	6 1/4	— 1/8
22 3/4	12	13 1/2	5 1/8	7 3/4	4 7/8	7 3/8	4 3/8	N.P.	Pennok Oil	No sales					
17	8 1/2	24 3/8	7	18	4 7/8	16	11 1/2	25	Red Bank Oil	No sales					
30 1/4	12	15 1/2	3 1/2	12 7/8	4 1/8	8 1/2	4 1/2	N.P.	Reiter-Foster	3,800	5 1/4	5 1/2	4 1/2	5 1/8	— 3/4
7	4 1/2	7	4 1/2	12	4 1/8	11	6	N.P.	Ryan Consolidated	400	6 1/2	6 1/2	6	6	....
10	7 1/2	8	5 1/4	7 1/4	5 1/2	5 7/8	2 3/8	$10	Salt Creek Cons.	800	2 3/8	3 1/8	2 3/8	3 1/8	+ 1
35	24 1/8	35 1/2	27 1/4	35	23 1/8	25 7/8	14 5/8	10	Salt Creek Prod.	700	15 1/4	16	15	15	—1
6 7/8	1 1/4	7	1 1/4	3 1/2	1	2 1/2	1 1/8	5	Savoy Oil	100	1 1/2	1 1/2	1 1/2	1 1/2	+ 3/8
92	63 1/2	92	63 1/2	93 1/4	75	89	82	100	Transcontinental, pfd.	No sales					
8	4 1/2	7 3/8	4 1/4	9 1/8	4 3/4	6 1/2	3 1/2	5	Venezuelan Petrol	1,300	3 1/2	3 3/4	3 1/2	3 1/2	— 1/8
8 1/8	5 1/2	8	4 3/4	8 1/4	4 7/8	9 1/8	4 1/8	$1	Woodley Petroleum	100	4 1/2	4 1/2	4 1/2	4 1/2	+ 1/8
6 1/2	6	6	1 3/4	8 3/8	2 1/8	..	..	25	Y Oil & Gas (new)	500	1 1/2	1 1/2	1	1	— 3/8

TRANSACTIONS IN OIL SHARES ON NEW YORK STOCK EXCHANGE

Quotations Compiled by Francis, Bro. & Co., Members of New York Stock Exchange, Kennedy Building, Tulsa, Okla

1926 High	1926 Low	1927 High	1927 Low	1928 High	1928 Low	1929 High	1929 Low		Listed capital	Par value	Div. rate	Last paid	Stocks—	Sales	For Week Ended July 27 Open	High	Low	Last	Chg.
32⅞	24¼	37⅝	27⅝	43⅞	27⅛	42⅝	22½	(sh)	922,075	N.P.	50cQ	Oct. 31, 28	Amerada Corp.	9,700	30⅞	31	28½	28⅞	— 2⅛
74	39⅞	82⅛	35⅛	85	51⅛	64⅜	43⅛	(sh)	209,180	N.P.	.....	.....	American Republics Corp.	2,600	44⅛	45¼	43	43	— 1⅞
60	44¾	50¼	35	53⅜	37½	47¼	40½		$57,260,300	$25	50cQ	Dec. 31, 28	Associated Oil	x11,000	44½	44½	44½	44½	+ ¼
128⅜	97	131⅜	104	66⅜	50	77⅞	53½		50,000,000	25	25cQ	Dec. 15, 28	Atlantic Refining	100,000	67¼	68	63½	65⅝	— 1¾
33½	23½	35½	20¾	53	20	49½	38⅛		35,194,000	25	50cQ	Feb. 5, 29	Barnsdall Corp.	50,200	38¾	39½	36½	38	— 1
94½	50	96¾	65	94⅞	68	90⅞	61		20,785,400	100	.....	.....	General Asphalt	14,200	89½	91½	86⅞	89¼	— ⅛
72	50¼	175¾	60⅛	167	79	109	70½		25,000,000	100	.....	.....	Houston Oil	3,200	76	78½	71½	78½	+ 1
34	19⅝	32¾	17⅝	38⅜	21¾	39⅜	30	(sh)	959,457	N.P.	50cQ	Jan. 31, 29	Independent Oil & Gas ...	24,200	33⅞	33⅞	30⅝	31¼	— 2¼
12¾	7½	12⅛	7⅝	39⅝	9	52⅝	29		8,203,080	$10	.....	May 31, 24	Indian Refining	91,000	41⅞	47½	40⅛	46	+4⅞
25⅞	16½	37¾	20½	39¼	27⅜	38⅜	26	(sh)	3,992,122	N.P.	.....	May 1, 27	Lago Oil & Transport ...	2,500	33	34½	33	33½	— 1½
19⅞	12	18⅛	10	19¾	9⅜	18	11¾	(sh)	1,237.078	N.P.	.....	.....	Louisiana Oil Refining ..	12,500	11⅝	11⅝	11⅛	11⅛	— ½
28	16½	22¾	12	25½	12½	18½	12	(sh)	330,000	N.P.	.....	.....	Maracaibo Oil	5,000	14½	16⅛	14	16	+ ¾
63⅜	49¼	58½	31	49¾	33	47⅛	33⅝	(sh)	2,316,692	N.P.	.....	Mar. 31, 27	Marland Oil Co.						
13¾	6	9¼	3	73	4⅝	69⅜	36¼	(sh)	945,939	N.P.	.....	Dec. 15, 20	Mexican Seaboard	51.700	40	41¼	36¼	40⅛	+ ⅛
37	20½	39⅝	25½	44½	25⅛	39⅞	30½	(sh)	1,357,461	N.P.	50cQ	Feb. 15, 29	Mid-Continent Petroleum	13,900	32½	33	31¾	33	+ ½
104½	90	105	97	120½	103¼	121	120¼		$6,718,000	$100	$1.75Q	Sept. 1, 28	Mid-Continent Pet. pfd. ..	No sales					
2½	½	3¾	1⅝	7⅜	2⅜	5⅛	3½		24.298,850	10	.....	July 1, 23	Middle States	5,800	3½	3⅝	3¼	3¼	— ¼
76½	56⅛	65⅞	40⅛	54⅞	38¼	63	40¼		48.807.400	$50	.....	Oct. 20, 27	Pan American P. & T. ...	53.000	62	62½	59½	60	+ 2
78⅝	56⅞	66⅜	40¼	58⅞	37⅜	66⅜	40½		121,097,900	50	.....	Nov. 15, 24	Pan American P. & T. B.	111,700	63	63⅝	59½	60	— 3⅛
46	30	37⅞	16¾	28⅜	15½	17½	13¾	(sh)	400,000	N.P.	.....	Jan. 30, 27	Pan American Western B	x12.000	14⅝	14⅝	13¾	13¾	— ¼
32	4½	18⅞	8	21¾	11½	15¼	9	(sh)	198.770	N.P.	.....	.....	Panhandle P. & R.	1,200	9⅛	9⅛	8½	8½	— ½
99⅜	51	83	54	108	70	76	47½		$2.935.200	$100	.....	July 2, 23	Panhandle P. & R. pfd. ..	500	55	55	55	55	.....
57⅜	40	60¼	36¼	53⅞	35¼	47	35⅛	(sh)	2,406,796	N.P.	37½cQ	Jan. 2, 29	Phillips Petroleum	18 400	36⅛	37⅞	35¾	37⅛	— ⅝
....	....	1⅛	½	5¼	½	3⅜	2		$29,622.925	$25	.....	.....	Pierce Oil Corp.	5.100	2	2	1⅞	1	.....
7	2¼	5½	2½	7	3½	5⅞	4	(sh)	2,500,000	N.P.	.....	.....	Pierce Petroleum	13,500	4⅛	5¼	4¾	5	— ⅞
60¼	48	55½	45⅝	68	46	65⅝	53¼		60,000.000	25	.....	Aug. 31, 27	Prairie Oil & Gas	9.600	53	53⅛	51¼	52	—1
137½	122½	190	130¾	280	172	61⅞	53⅝		$101,250,000	$25	75cQ*	Mar. 31, 29	Prairie Pipe	4.400	60¼	60½	60	60	— ¾
20¾	11	33⅞	16¾	29⅞	16	25⅞	17		$37,450,850	$50	.....	Sept. 15, 23	Producers & Refiners	6.100	17	17	15¼	15⅞	— 1⅛
41¾	30¾	50	36⅞	49⅝	41	46¾	38¼		2.845 350	50	.....	May 1, 25	Producers & Refiners pfd.	x31.000	39	39	37¾	38⅛	— ⅜
31	25¼	33½	25	31⅝	19	30¾	23¼		75,959.350	25	25cQ	Dec. 1, 28	Pure Oil Co.	17.100	26	26½	25⅜	25⅜	— ⅞
27½	22	28⅝	25⅜	56	23	49⅝	39¾		47,025,000	$25	.....	Nov. 15, 28	Richfield Oil	15 000	40⅝	40⅝	39⅝	39⅞	— ⅝
57⅜	47⅜	54½	44¼	64	44⅝	55¾	49⅞	(sh)	611,303	13.40	50cQ	Jan. 10, 29	Royal Dutch, N. Y., sh. ..	3.700	53⅞	54⅜	53¼	54⅛	+ ⅛
48⅝	40½	47⅞	41⅜	57½	40⅝	55¾	43⅞	(sh)	£30,000,000	£1	$1.45	July 23, 28	Shell Transport & T.	100	43⅜	43⅜	43⅜	43⅜	— 1⅞
31	24	31¾	24⅝	39¼	23¼	31¾	25¾	(sh)	20.000.000	N.P.	35cQ	Dec. 31, 28	Shell Union Oil	12 500	26⅜	26⅝	26	26⅜	— ¼
25⅝	15⅛	26⅜	14¼	27¼	18⅛	39⅜	18⅛		$8 357.000	$10	10cQ	Dec. 15, 28	Simms Petroleum	34.800	37¾	37¾	34½	34½	— 3¼
24⅞	16¾	22⅜	15	46¾	17⅜	45	35⅛	(sh)	4,501,915	N.P.	.....	.....	Sinclair Consolidated	134.400	35¼	35¾	33	34	— 1½
99½	90	104½	97	110	102½	111	107		$16,604,600	$100	$2Q	Nov. 15, 28	Sinclair Consolidated pfd.	300	110	110	110	110	— ¼
37⅛	26⅝	37⅜	24⅛	42⅝	25	46½	32⅞		27 396 590	25	50cQ	Dec. 15, 28	Skelly Oil Co.	23 200	41⅝	42½	40¼	41½	— ¼
63⅝	51½	60¾	50⅜	80	53	81⅞	64	(sh)	12,594,098	N.P.	65½cQ	Dec. 15, 28	Standard Oil of Cal.	69.700	73	73¼	70⅛	71	— 1⅞
46⅜	37½	41⅜	35⅛	59⅜	37¾	62⅜	48		$611,120,700	$25	25cQ*	Dec. 15. 28	Standard Oil of N. J.	60 900	57⅞	57⅞	56⅛	56¾	— ⅜
47¼	30⅜	34⅛	29¾	44¼	28¾	45¾	38		427,973,275	25	40cQ	Dec. 15, 28	Standard Oil of N. Y.	36 300	40¼	40⅜	38⅜	39¼	— ¾
41¾	30⅛	34⅞	30	77	31½	76⅜	57	(sh)	1,206.073	N.P.	25cQ	Dec. 15, 28	Sun Oil	2 200	75	75	73	73	— 1⅞
5¼	1	6½	3⅛	14¼	2½	12	7	(sh)	1,267,000	N.P.	.....	Dec. 20, 20	Superior Oil Corp.	30.100	7⅜	7½	7	7	— ½
58	48	58	45	74¾	50	68½	57¼		$211.076.650	$25	75cQ	Jan. 1, 29	The Texas Corporation ..	45.900	61⅝	63⅛	61⅜	62⅝	+ ¼
19½	12	18⅞	12	26⅝	12⅛	23⅞	16		8,380,340	10	.....	Jan. 3, 28	Texas Pacific Coal & Oil .	111,500	16⅛	16⅞	15½	16⅛	— ⅛
39¼	27	29⅛	19	41½	19⅝	40	27⅛	(sh)	2,168,410	N.P.	20cQ	Dec. 15, 28	Tide Water Oil Co.	No sales					
103	87¼	90⅛	85	100⅛	86	97½	90⅛		$20.705.200	$100	65½cQ	Dec. 15, 28	Tide Wat. O. Co. 5% pfd.	1.400	91	91	90	90½	— ⅜
27	20⅞	19⅛	15¾	25	14¾	23½	17½	(sh)	4.796.158	N.P.	.....	Aug. 1, 27	Tide Water Associated ...	62 100	20½	20½	19⅛	19⅛	—1⅛
5½	3	10⅝	3¾	14⅜	7¼	14¼	9	(sh)	3,742,029	N.P.	.....	.....	Transcontinental Oil	129.100	12⅜	12½	10⅝	11⅜	— ⅜
58⅜	37¼	56½	39⅝	58	42⅜	54½	46		$94,798.100	$25	50cQ	Nov. 10, 28	Union Oil of California ..	6 300	47⅛	47¼	46½	46⅝	— ⅞
120⅜	84¼	127½	94	128⅛	110	150¼	121⅞		31,061,200	100	$1.25Q	Dec. 1, 28	Union Tank Car Co.	2 300	146	147½	145	146½	— 3
30⅛	23½	34½	24½	44⅞	26	42⅞	28½	(sh)	356.000	N.P.	50cQ	Jan. 2, 29	Warner Quinlan	9 600	31½	31⅞	29¼	29¾	—1⅝
29⅜	25⅛	27½	20	38	20⅛	38	30¼	(sh)	490,000	N.P.	50cQ	Jan. 20, 29	White Eagle Oil & Refg. .	6 800	34½	34½	33½	33½	— 1
....	....	....	....	....	....	29¾	18⅛		.....	....	.....	.....	Wilcox Oil & Gas	3.300	18¼	18¼	17¼	17½	— ⅝

*Also extras. †Ex-dividend.

STANDARD OIL STOCKS ON NEW YORK CURB

21	16	21⅝	17⅞	22⅜	14⅞	18¾	14		£4,126.460	£1	.....	June 6, 28	Anglo-American Oil	5.200	14⅝	15	14⅝	15	— ⅛
....	....	3¾	¾	5	1¼	2½	1⅛	(sh)	500.000	N.P.	.....	.....	Atlantic Lobos	200	1¼	1¼	1¼	1¼	.....
76	65	69	50	56½	44½	46½	35		1,000,000	25	$18.A.	Oct. 15, 28	Borne Scrymser	50	35	35	35	35	.....
59½	42	60	45	76	53	74¼	65¼		10.000.000	50	$1Q	Dec. 15, 28	Buckeye Pipe Line	100	69⅛	69⅛	69⅛	69¼	+ ⅛
82½	65	126	76½	161	117	193⅜	140⅛		3.000.000	25½	$1Q	Dec. 28, 28	Chesebrough Mfg.	200	188	188	177	177	—3
25⅞	17½	22⅝	16¼	23	16	29	17¼		36,057,840	10	.....	Dec. 15, 27	Continental Oil	6,000	19⅛	19⅜	18⅛	18½	—2
137	102	137	89	114	67	75¾	60		1.500.000	50	$1A	Dec. 15, 28	Cumberland Pipe Line ...	No sales					
63¾	43	68½	47	88	64⅛	70⅛	59⅛		5,000,000	100	$1Q	Nov. 1, 28	Eureka Pipe Line	60	39	39	39	39	+ 1
32½	9⅞	13½	3½	13	4¼	6⅝	5⅞		16.000.000	100	.....	June 30, 25	Galena Signal Oil	100	5⅞	5⅞	5⅞	5⅞	
68½	52	68½	54	114¾	59¼	126⅞	89⅝		73,117.577	25	30cQ*	Jan. 1, 29	Humble Oil & Refining ...	8.800	123½	123½	118⅜	119⅞	—6
144½	125½	182	123¾	290½	176½	340½	290		20.000	100	10%S.A.	Dec. 15. 28	Illinois Pipe Line	250	309½	309½	306	306	—3
....	....	64¾	37¾	104	56¾	30⅜	26⅝	(sh)	6,458.267	N.P.	25cQ	Dec. 1, 28	Imperial of Canada	6,900	29½	29⅞	28⅞	29½	— ¼
72½	58	94½	61	91⅞	74⅜	28⅜	26¾		$5.000.000	$50	$1Q	Feb. 15, 29	Indiana Pipe Line	200	106⅛	106½	106	106	+ 2
35½	28¾	39	28¼	55	35	30⅜	22½	(sh)	7.123.144	N.P.	25c	Nov. 30, 28	International Petroleum ..	6,300	25⅞	26	24½	25⅛	+ ⅛
20¾	12½	24	13½	32⅜	19⅜	25⅞	21⅜		$6 363,350	12.50	25c	Dec. 15, 28	National Transit Co.	900	22⅝	22⅞	22½	22½	— ½
51½	27¼	44½	31¼	75	38½	85	70		5,000,000	100	.....	July 15, 26	New York Transit	No sales					
80½	64	100	70	69	56½	63	52¾		2.000.000	50	$38.A.	Jan. 2. 29	Northern Pipe Line	400	54	54	54	54	—4¾
67¾	55¾	67⅞	52	84	58½	75⅜	64⅛		60,000.000	25	50cQ*	Dec. 15, 28	Ohio Oil Co.	1,800	70⅞	70⅞	70	70⅜	—1⅝
24¾	15	39	12	84	28	44½	23⅛		10,000.000	25	$1.25	Dec. 15, 28	Penn Mex. Fuel	2,100	32	36⅞	32	32	—6
220	84½	201½	175½	220	167	219½	200		4,000,000	100	$5S.A.	Dec. 20, 28	Solar Refining (old)						
....	....	....	....	....	....	50	37¾		.....	....	.....	.....	Solar Refining (new)	100	37⅞	37⅞	37⅞	37⅞	—1⅜
74½	61½	27¼	15½	19	15	22½	13		1,000,000	10	$2	Dec. 1, 27	Southern Pipe Line	100	20¼	20¼	20¼	20¼	— ¾
50	34½	41½	35	71⅞	36¾	69⅞	62		2,000,000	25	50cQ	Dec. 31, 28	South Penn Oil (old)						
....	....	....	....	....	....	60¼	40⅜		.....	....	.....	.....	South Penn Oil (new) ...	1,400	52⅜	52⅜	51	51	—2
56	47½	83	55½	102	70	70	62¾		3.500.000	100	$1Q	Oct. 1, 28	Southwest Pa. Pipe Lines.	No sales					
70½	60½	81½	64⅝	95⅞	70⅞	63	54		228,415.463	25	61½Q	Dec. 15, 28	Standard Oil of Indiana ..	43.500	55⅜	55⅜	53⅛	53½	—2⅞
36½	16½	20⅞	14⅝	37⅜	15	22⅛	18		8.000.000	25	.....	June 16, 24	Standard Oil of Kansas ..	1.200	19½	20	19¼	20	— ⅛
134⅜	108	130	111½	179⅜	122¼	45¼	35⅛		17,012.559	10	$1Q	Dec. 31, 28	Standard Oil of Kentucky.	2.020	37⅛	37⅛	36⅛	36⅝	— ½
51⅛	42	49½	40	54⅞	39⅞	50¼	45½		4,559,850	25	63cQ	Dec. 20, 28	Standard Oil of Nebraska.	1,500	47⅛	49	47⅛	49	+ 2
372	288	87½	72	134	71	129	110¼		14,000,000	25	62½cQ	Jan. 2, 29	Standard Oil of Ohio	550	119½	119½	118	119½	—1½
21	15	21	14½	23½	16	18	15		861,000	25	.....	Nov . 1, 19	Swan Finch Co.	No sales					
109⅜	90¼	....	....	111	72	133¾	105½		125,619,000	25	75cQ	Dec. 20, 28	Vacuum Oil Co.	2.300	120¼	121	118⅝	118⅝	— ⅞

*Also extras.

first half of previous year. Stock outstanding amounts to 1,437,642 no-par shares of common.

Shreveport-El Dorado Pipe Line

Shrevepore-El Dorado Pipe Line Co., Inc., reports for six months ended June 30, 1929, net profit of $104,301 after interest, federal taxes, and reserves for obsolescence and depreciation, compared with $149,888 in first six months of 1928.

Prairie Pipe Line

The Prairie Pipe Line Co. reports a consolidated net income of $5,575,000 for the three months ended June 30. This is equal to $1.38 a share on 4,050,000 capital shares and compares with $5,400,000, or $1.33 a share, in the preceding quarter.

Buckeye Pipe Line

Buckeye Pipe Line Co. declared the regular quarterly dividend of $1 payable September 14 to stock of record August 23.

Pure Oil

Pure Oil Co. declared regular quarterly dividend of 37½ cents on common, payable September 1 to stock of record August 10.

PROCESS RECLAIMS TANK BOTTOM B.S.

(Continued from Page 41)

ated instrument that controls the temperature of the fluid as it leaves the treater. This not only facilitates operations, but also prevents the possibility of the gun barrel boiling over.

The fluid passes from the treater into the bottom of the gun barrel through a 4-inch line that runs to the center of the tank with ell looking up Ten inches above this ell is a perforated table that distributes the fluid over the entire area of the tank, thereby utilizing the maximum settling time and space. Eight or nine feet of salt water is held in the gun barrel for water wash at a temperature of 195 to 200 degree Fahrenheit. This causes most of the water to coalesce and separate, but due to a small amount of agitation from pump pressure, about 4 or 5 per cent of water is carried over by gravity into the settling tank, where three or four feet of water is held for a second salt water wash.

Separation Completed

This completes the separation and the clean oil gravitates into the stock tank. This oil, when it reaches the stock tank, is around 140 degrees Fahrenheit, and when deliveries are made to the pipe line, it is pumped through the interchanger where it drops in temperature to around 120 degrees Fahrenheit, while the incoming fluid is heated correspondingly. (See Figure 6.)

Figure 4 shows boiler house on left, insulated treater in center, and pump house on right.

Figure 5 shows Edwards treater, gun barrel, settling tank and two stock tanks. Note the vent valves and lines leaving the apex of the roof. These tanks are riveted steel gas-tight tanks. The gun barrel is equipped with water seal that required six ounces pressure to break. This is a safety factor in case of boil-over.

Each tank is equipped with vacuum and pressure vent valves with release lines tied into header and by water-cooled condensation, 1,000 to 1,500 gallons of 60-66 Baume gasoline per day is obtained, depending on the amount of oil treated. This gasoline meets all specifications of commercial gasoline, with the exception of gravity and Engler distillation. Credit received for recovered gasoline makes this plant self-sustaining and the reclaimed oil is net profit.

ROCKY MOUNTAIN AREA

(Continued from Page 61)

Gypsy Oil Co.'s No. 1 Humphreys, NW cor. SW, Section 25-25s-36e, was drilling ahead at 3,260 feet after recovering tools lost at 3,206 feet when a gas pocket was encountered. Continental Oil Co.'s (Marland) No. 1 Wells, SW SE NE, Section 11-25s-36e, at 3,177 feet, had a showing of oil and gas through 1,500 feet of fresh water which was being carried to hold back gas pressure. The well was drilling at 3,205 feet. This concern's No. 1 McAllister, SW cor. SE, Section 24-26s-36e, was drilling at 2,560 feet in anhydrite with 15½-inch casing at 630 feet. This well had the top of the salt at 1,565 feet.

The Texas Production Co.'s No. 1 Sheppard, in the Rhodes area, SE cor. NE, Section 6-26s-37e, the recent interesting completion in Lea County, is averaging 1,360 bbls. of oil daily under a back pressure of 350 pounds. The Vacuum Oil Co. was drilling ahead in hard lime at 4,800 feet in No. 1 State, SW cor. NW, Section 13-17s-34e, after encountering a 250-bbl. oil flow at 4,710 feet. There has been no change in the amount of oil showing in the hole as the result of deeper drilling.

The Empire Gas & Fuel Co. is changing from standard to rotary tools at 3,480 feet in No. 1 Closson, NE NW SE, Section 6-22s-36e, in the Eunice area. On a recent test this well gauged 25,000,000 feet of sulphur gas at 3,480 feet. Rainbow colors showed on returns from 3,440 feet. Gypsy Oil Co. is fishing for tools in No. 1 Mattern, SW SW SE, Section 24-21s-36e. Continental Oil Co.'s (Marland) No. 1 Meyers, SW SW NW, Section 28-22s-36e, is ready to spud.

Pearl Area

In the Pearl area of Lea County, J. D. Cook is drilling in anhydrite at 1,620 feet in No. 1 State, CWL NW NE, Section 12-21s-33e. Cranfill & Reynolds are drilling in salt at 1,936 feet in No. 1-B State, NE cor., Section 2-21s-33e. The Ohio Oil Co. has reached a depth of 1,300 feet in No. 1 McGeorge, SE SW, Section 30-20s-33e. This well had the top of the anhydrite at 1,165 feet and the top of the salt at 1,200 feet. Continental Oil Co.'s (Marland) No. 1 Flint, SE cor., Section 28-20s-34e, has reached a depth of 3,435 feet where 8¼-inch casing is being cemented. The Empire Gas & Fuel Co.'s joint test with Henderson and others, on the Martin permit, SW SW NE, Section 28-30s-33e, was drilling in sand at 3,785 feet after encountering 300 feet of salt water at 3,750 feet. The water has increased slightly at the present depth.

In the Hobbs High area no important developments have been reported during the week. The Ohio Oil Co.'s No. 1 State, NE SE NE, Section 9-19s-38e, was spudding at 260 feet. Walker Oil Corp.'s No. 1 Terry, NW SE, Section 10-19s-38e, was shut down for cement to set around 10-inch casing at 1,652 feet. Humble Oil & Refining Co.'s No. 1 Bowers, C NE NE, Section 30-18s-38e, was drilling in salt at 1,920 feet. Midwest Refining Co.'s No. 31 Capps on the SW Section 3-19s-38e, has landed 8¼-inch casing at 4,030 feet. A show of oil is reported at 3,998 feet in this well. Midwest Refining Co.'s No. 24 Leach, in the NW Section 16-19s-38e, has cemented 15½-inch casing in the red beds at 1,171 feet.

UTAH

Phillips Petroleum Co. set 6¼-inch casing at 5,015 feet and is drilling ahead after effecting a water shutoff, at 5,070 feet in No. 1 Shick, C NE, Section 16-27s-16e, on the Barrier Creek structure of Wayne County.

The Utah Southern-Moab Consolidated's No. 1 King, SE NE SE, Section 13-23s-20e, Salt Valley structure in Grand County, has cleaned out to bottom at 3,800 feet after setting 6¼-inch casing at 3,775 feet. The Utah Southern Oil Co.'s No. 1 Farnsworth, NE SE SE, Section 29-3s-1e, in the Pleasant Valley area near Myton, Utah, was shut down for orders at 3,000 feet.

MONTANA

The Hardin Oil Co. has brought in its sixth well at about 700 feet, with a gas production. For many years there have been gas seeps noticed in the vicinity of Hardin; deep tests failed to find anything profitable, but showed a gas horizon at 700 feet. The city now expects to drill about 10 shallow wells and obtain enough gas to serve the community.

The Delmar Oil Co.'s No. 2 in the Lake Basin Field, near Billings, was struck by lightning and the rig and equipment destroyed. The well was making about 20 bbls. daily.

The Bears Den Oil Co.'s test in the Sweetgrass Hills, north of the Sunburst Field, made an average of 36 bbls. daily during test. The crude is a light oil, paraffin base, quite different from the oil found in the Sunburst Field.

In the Sunburst Field the Fifty Six Petroleum Co.'s Jarrett No. 1, on Section 29-35-2, flowed 120 bbls. per day and is easily the best well for the month in the field. The Wyomont Oil Co., on the Standard lease, Section 25-35-2, has an average producer of about 10 bbls. in the Ellis sand at 1,445 feet. The Murphy Petroleum Co. found a showing in the Ellis sand at 1,585 feet, and shot with 80 quarts. Will make a small pumper. The Potlatch Oil Co.'s deep test in the Sunburst Field is shut down with a fishing job, a bit was lost, but as the hole is dry and clean little trouble is anticipated.

The Texas Pacific is preparing to start a deep test in the Sunburst Field, and the Continental Oil Co. is expected to start a deep well in the Cat Creek area.

The recent strike of oil in the first Ellis on the Flatwillow Dome, south of Cat Creek, does not appear to be large enough to warrant a commercial production. The well is now drilling deeper.

The Texas & Pacific's wildcat on the Pendroy Dome reached the Pondera sand and found hot sulphur water. It is now shut down and will probably be abandoned. The same company also found a duster on the Acme Dome, near Pondera.

The Sterling Oil Co.'s well in the Bannatyne Field reached the pay and looks like a 10 bbl. pumper. The company announced it would drill four more wells. The Texas Pacific has placed 5,000 bbls. of tankage in this field for storage, and the Dakota Montana is setting poles for an electric power line to connect with the field. The Bannatyne operators claim they have sufficient production to warrant a pipe line.

In the Pondera Field the Texas Production Co. found a small well of about 10 bbls. on Section 15-27-4, in No. 10 on the Kingsbury lease.

ROCKY MOUNTAIN FIELDS
Daily Average Pipe Line Runs
Week Ending July 27

	Bbls.
WYOMING	
Salt Creek	30,820
Frannie	30
Big Muddy	2,270
Oregon Basin	5,620
Byron	....
Dutton	50
Elk Basin	750
Ferris	....
Grass Creek	2,320
Greybull	10
Hamilton	1,000
LaBarge	2,070
Lance Creek	210
Lost Soldier	4,140
Osage	560
Poison Spider	1,080
Rock River	2,430
Rex Lake	130
Lander	360
Simpson Ridge	60
Teapot Dome	30
Mule Creek	550
Total	54,490
MONTANA	
Cat Creek	1,430
Kevin-Sunburst	6,860
Pondera	3,030
Lake Basin	90
Total	11,410
COLORADO	
Moffat	1,413
Fort Collins	2,247
Florence	986
Iles	1,589
Tow Creek	489
Boulder	25
Rangely	100
Total	6,849
NEW MEXICO	
Artesia	875
Cap Rock (Maljamar)	454
Hogback	100
Rattlesnake	1,129
Table Mesa	....
Total	2,558
Grand total	75,307

NOVEL METHODS USED IN FIGHTING FIRES

(Continued from Page 42)

through and the slug removed. A pressure of 450 pounds was encountered after penetrating the 4¾-inch oil string. Following this operation the drill was removed and the gate closed. The whole drill assembly then was removed and the gate attached to a 3-inch flow line with a 3-inch flow bean interposed. The well then was allowed to produce through this opening.

The 6-inch casing, which had to be drilled through in order to drill into the 4-inch oil string, was not removed because it was deemed necessary to take advantage of the maximum safety factor in case anything should happen to the 4-inch while drilling through. It had been calculated that the clearance between the 4-inch and the 6-inch was so small that it would not cause any trouble when drilling into the 4-inch through the 6-inch even though the 4-inch should be completely off center. It was the general opinion that the various strings of pipe would be centered within the 11-inch since the working chamber was only 30 feet below the surface. This was incorrect, however, as the 11-inch casing was found to be separated from the 16-inch stovepipe only on the west side. The 8-inch was separated from the 11-inch only by the thickness of the collar on the east side, as was also the 6-inch and the 4-inch. If wells are crooked 30 feet below the surface what must they be at 8,000 feet?

Mud Pumps Put to Work

After the 4-inch had been drilled into, flow lines completed and the well allowed to produce through this connection, three mud pumps were placed against the pressure of the casing and mud, water, hematite, hemp rope, asbestos, cotton seed, sheet asbestos with wire inserts, cement sacks and any other material available were pumped into the hole. At one time a slight bridge was formed at the top but not for long.

During this operation practically all of the oil was cut out of the fire, the remaining gas going to the surface resulting in only a small subdued fire. At a most inopportune moment however all three pumps went down at the same time and the fire was again in full swing. A 1½-inch hole then was drilled through the opposite side of the clamp into the 4-inch and an additional 3-inch line laid to it. Seven mud pumps then were placed in parallel and mud, water, and hematite were pumped into the 4-inch casing. This brought the fire down to an extremely low state and the asbestos crew was able to close the 6-inch master tubing gate and the 2-inch gates on the casing. The slightest leakage in progress was extinguished by a fire extinguisher crew and the job was done.

The surplus of oil and lack of complete combustion during the fire formed a large mass of coke which completely covered the Christmas tree, and presented a weird appearance. It was necessary to remove a part of this coke to get at the master gates. After 26 days of furnace heat the fittings and gates of the Christmas tree were found to be in fair condition. The gates that were necessary to be closed functioned perfectly and the beans later were put into service again.

Wind Machine Aids Crew

The crew which handled the surface control work after the fire had been reduced by pumping in mud and hematite through the tunnel approached the fire with a wind machine directly back of them and a fan water stream on both sides. With this arrangement the temperature within the small radius covered by the fans was cooler up to within a few feet of the well than it was 50 feet away on an unprotected side.

In the two previous fires at Santa Fe Springs the General Petroleum took over George F. Getty's No. 17 Nordstrum and placed S. J. Dickey, its chief engineer, in charge while the Union Oil Co. undertook control work on the Bell View's No. 2 Grohs and assigned this work to one of its most competent engineers, C. W. Eckles. In combating the first-named fire, the first activities consisted of demolishing about 15 rigs, erecting corrugated iron sheds and installing sprinkler systems on nearby derricks and wooden structures. No. 17 Nordstrum was not making much oil but gas was flowing through both the drill pipe and up around drill pipe. Control work was complicated due to the fact that the drill pipe in the hole was supported from the kelly which extended into the casing 7 or 8 feet and was bent over at right angles at the top of the casing, the fire burning from the end of the kelly as well as from the casing at the well.

Shield Built and Tunnel Started

A corrugated asbestos shield with steel frame was erected about 2,000 feet from the well, a pit dug with a steam shovel back of this shield, and a tunnel started toward the well to attempt to control the well from below the surface of the ground. The tunnel was carried forward on a down grade from a point 225 feet from the casing and was timbered throughout according to state regulations. The work was hampered by quicksand and loose sand above the water table, as well as sand fallen cavities found around the casing. As the casing was approached, core drills were drilled from the tunnel face in and around the drill pipe and soil and atmosphere in

these holes tested for gas and oil before actually exposing the casing.

A chamber was constructed around the casing about 9 feet high and providing ample side room for handling long extension drills through stuffing boxes in the various necessary directions, and other equipment. The pipe in the hole consited of a 15½-inch outside casing, an 11-inch and a 9-inch casing with the 4-inch drill pipe in the center.

The first operation in the tunnel chamber consisted of placing clamps on the outside casing at the top and the bottom of the chamber and circulating cement through these connections. When the cement had set, the outside well casing was cut away, exposing the next size casing. A similar operation was gone through in placing clamps on the 11-inch casing and cementing the space between this casing and the 9-inch casing. This was done not only to make the casing rigid one within the other, but as a precaution against the extent of sand cutting from the flow inside of the 9-inch casing.

Tests Made First

In drilling into the casing the operation consisted of placing a clamp around the casing with a suitable gasket of lead or soft copper wire backed up with heavy hydraulic packing with a valve on a heavy nipple out of this clamp, and testing the packing material against the pipe to 2,000 pounds pressure before drilling into the casing. In each case a stuffing box was placed in the valve and a suitable drill inserted through the stuffing box, through the open valve, and the casing drilled into, the drill then being withdrawn through the valve, the valve closed and the drill taken out of the stuffing box before making any further connections. This was the procedure followed throughout the entire tunnel work.

Attempts then were made to form a bridge by means of various packing materials between the 9-inch casing and the drill pipe, so that heavily laden mud could be pumped into the well for the purpose of controlling its flow or for the purpose of leading off the production through lines to the surface below the bridge. These consisted of charging into the space between the 9-inch casing and the drill pipe various packing materials designed to be carried upward by the flow of gas and oil and to lodge either against the tool joint on the drill pipe or against a bridge of studs placed through a clamp attached to the 11-inch casing.

This packing material consisted, first, of hard wooden balls, solid and hollow aluminum balls, lead and steel wool, rubber packing, asbestos, paper pulp, chopped rope and bundles of hemp. At the same time this underground work was going on, work was being conducted on the surface of the ground cutting off the kelly below the swivel with an electric arc and a connection was made to the kelly with inside packer. Hematite, cement and Barite were pumped successively into the well through this connection, but except for the fire dying down low at the start the well continued to burn without much change.

Kelly Sand Cut

It was found alterwards that the kelly had been sand cut through its side at the surface of the ground, thus probably releasing pumped material at the top of the well. In an attempt to control the flow in the drill from the tunnel, a connection was made into the drill pipe and a large wooden ball, followed later by an aluminum ball, was charged into the drill pipe with mud, for the purpose of lodging in the drill pipe recess in the tool joint above, without success.

Attempts to control the well by restriction therefore, were given up and the connections made to the casing together with an additional 6-inch opening were connected to gas lines leading up through the tunnel to the surface of the ground and connected to two compressor stations and a positive blower set near the mouth of the tunnel, connections being made through large gas traps.

Drain connections to the gas line leading out of the tunnel were made to oil pumps driven by compressed air and located in the tunnel chamber to lift the oil out of the tunnel and prevent gas choking. In this way 9,000,000 feet of gas and 4,000 bbls. of oil per day were taken out of the well. The fire apparently was reduced 75 per cent and the flame was of sufficiently small proportions that it was believed safe to attempt extinguishing and capping the casing.

An attempt was made to extinguish the remaining gas and oil by means of the mud and steam lines laid at the beginning of the fire. Although fire apparently was extinguished several times it flashed back and continued to burn. During this playing of water, mud and steam, however, the fire was reduced to such an extent that it was possible to place cables on the all-steel junk, consisting of the rotary table, draw works, drill pipe, etc., and remove these from around the top of the casing.

Kelly Lifted From Hole

A welder eventually cut the kelly off near to the well and a steam hoist lifted the kelly out of the hole completely. This kelly, when removed, greatly simplified the operations of capping, the drill pipe of course now being held entirely by the centering studs in the tunnel below. The kelly was found to have been sand cut through its side at the top of the casing and also to have been sand cut completely loose from the drill pipe at the bottom of the kelly.

A steel bell then was constructed, picked up by a steam hoist and placed over the top of the reduced flame while the compressors still were sucking gas and oil through connections by way of the tunnel. The flame coming up from the under side of the bell was extinguished by piling dirt around the bell with hand shovels and a steam shovel, the flame now burning entirely from the top of the stand pipe. A 1-inch gas line was connected to the side of the bell, the valve on this line opened and the gas removed to a remote point. The valve on the stand pipe was closed and the small flame on top extinguished with foam streams.

Trenches were dug to drain away the oil that would be spilled while uncovering the casing when capping the well, and provisions made to pump it away. The steel bell was removed with a steam hoist and a 12-inch pipe elbow with converging cone stabbed into the 9-inch casing, thus diverting most of the flow of oil and gas away from men excavating and uncovering the connections on the casing in the well cellar. A flange was uncovered and found in good condition and connections made to this flange permanently, the gas and oil being led through the usual Christmas tree piping connections to traps and flow tanks. The connections in the tunnel then were permanently closed and the well was brought under control in a normal manner, 48 days after the fire originated, producing 11,000,000 feet of gas and 6,000 bbls. of oil per day.

The writer is indebted to R. H. Pence, manager of the Signal Engineering Co., for description of the method employed in controlling the McKeon Drilling Co.'s No. 2 York & Lockhart fire, and to the Union Oil Bulletin, published by the Union Oil Co. of California, and Doings in General, published by the General Petroleum Corp., for description of the work done in fighting the other fires.

RUSSIAN OIL MEN DESCRIBE METHODS

(Continued from Page 39)

work is being carried forward with a view of fitting it for service in the deeper drilling.

Americans to Visit U. S. S. R.

The Russian visitors to this country left Tulsa for California on July 23 and plan to return to New York in about 30 days and sail for home and take with them a number of American technicians and engineers, among whom will be Prof. R. C. Beckstrom of the University of Tulsa; Prof. Roswell H. Johnson, University of Pittsburgh, Pa.; Ruby C. Poor, gasoline plant engineer, who will make a brief visit to the various fields, and Messrs. Lester and Harris who will have charge of tools and remain in Russia.

With the friendly feeling existing between the directors and technical staff of the Government Oil Trusts of U. S. S. R., and the American engineers and with the adoption of the American methods and technique to Russian conditions it seems that much can be expected of these exchanges of visits and the future part that U. S. S. R. will play in the world's oil production promises to be a big one for their potential production is yet practically unknown.

OKLAHOMA FIELDS

(Continued from Page 72)

Company, farm—	Location	Wells	Prod.
Cotcha	23-7-6	12	3,747
Denmark	11-7-6	2	1,160
Hulhoke	14-7-6	10	1,050
Mungee	1-7-6	1	...
Payne	5-7-7	3	2,192
Pottie	35-8-6	4	142
Renton	11-7-6	3	167
Independent:			
Carpenter	27-7-6	3	545
Davis, R.	13-7-6	4	1,165
Reed	26-7-6	1	25
Tewee	14-7-6	6	1,277
Williams	15-7-6	1	510
Independent & Highway:			
Harris	23-7-6	9	2,017
Indep. & White Eagle:			
Davis	2-7-6	4	440
I. T. I. O.:			
Campbell	1-7-6	1	181
Dungan	35-8-6	3	387
House, M. A.	1-7-6	1	31
House, W. E.	1-7-6	1	16
House, "B"	2-7-6	4	604
Hull	26-8-6	3	349
Jackson	1-7-6	3	355
McCulla	1-7-6	3	623
Nitey	2-7-6	5	92
Phoebe "A"	36-8-6	2	27
Phoebe "B"	36-8-6	3	21
Reed	1-7-6	1	2
Soketheche	1-7-6	3	210
Magnolia:			
Cruse	2-7-6	4	120
Denby	11-7-6	4	184
Harjo, A.	14-7-6	2	70
Harjo, B.	14-7-6	2	168
Pottie	35-8-6	4	24
Reed, E.	31-8-7	1	24
Reed, I.	22-7-6	3	312
McCulloch & Sands:			
Harrison	4-7-6	1	...
Mid-Continent:			
Brunner	11-7-6	4	120
Eleck	23-7-6	1	25
Smith	5-7-7	8	14,655
Wadsworth	36-8-6	4	120
W. B. Pine:			
Hoyocha	26-8-6	7	1,805
Pine-Phillips:			
Pottie	35-8-6	1	65
Prairie:			
Chilcoat	25-8-6	3	590
Coker	1-7-6	2	637
Gibson	14-7-6	5	1,030
Harris	14-7-6	4	485
House	2-7-6	4	120
Johnson	24-7-6	2	1,090
Lustey	5-7-7	2	...
Moppin	24-7-6	2	220
Reed	13-7-6	2	795
Talley	14-7-6	4	580
Thomas	5-7-7	1	205
Williams	15-7-6	2	170
Wood	26-7-6	3	395
Carr	9-7-7	1	675
Prairie & Amerada:			
Sunny	14-7-6	5	825
Prairie & Slick:			
Cudjo	26-7-6	4	810
Pure:			
Brinson	24-7-6	3	1,138
Cotcha	14-7-6	10	1,850
Harjo	11-7-6	4	951
Hollins	11-7-6	1	252
Reiter-Foster:			
Bunyard	14-7-6	4	515
Jefferson	31-7-6	1	13
McCan	33-7-6	1	47
Shaeffer:			
Narcombe	36-8-6	2	...
Shell:			
Caesar	11-7-6	1	152
Glass	26-7-6	1	...
Hotulke	23-7-6	4	595
Johnson	13-7-6	4	1,552
Sinclair:			
Blanton	11-7-6	1	272
Cosar	30-8-6	3	795
Haney	12-7-6	1	90
Phillips	5-7-7	1	1,560
Tewee	14-7-6	2	1,445
Sinclair & Kingwood:			
Pompey	24-7-6	1	110
Skelly:			
Carl	14-7-6	2	1,580
Snowden-McSweeney:			
Tiger	13-7-6	2	...
Superior:			
Potulka	31-8-6	1	3
Texas:			
Brooks	25-8-6	1	5
Coker	1-7-6	3	...
Janey	11-7-6	6	1,145
Texas & Independent:			
Hutulke	23-7-6	5	1,265
Hutulke	22-7-6	3	627
Tidal:			
House	1-7-6	1	360
Johnson	1-7-6	1	20
Twin State:			
Lowe	35-8-6	1	60
Total		353	79,229

Carr City Pool

Company, farm—	Location	Wells	Prod.
Barnsdall:			
Coker	11-8-5	9	1,857
Fife	14-8-5	2	189
Carter:			
Coker	2-8-5	2	2,420
Empire:			
Cluck	11-8-5	12	4,741
Gypsy:			
Coker	10-8-5	1	12
Coker, C.	2-8-5	1	1,167
Fife	14-8-5	1	15
I. T. I. O.:			
Simpson	10-8-5	1	...
Tully	10-8-5	1	...
Magnolia:			
"Fee"	11-8-5	3	827
Killing	14-8-5	1	6
Prairie:			
Billington	11-8-5	10	1,940
Mitchell	15-8-5	1	165
Sinclair:			
Bean	11-8-5	3	350
Harjo	11-8-5	3	630
Total		51	14,319

East Seminole Pool

Company, farm—	Location	Wells	Prod.
Barnsdall:			
Keypaya	7-9-7	1	20
Continental:			
Boling	17-9-7	1	...
Perry	18-9-7	2	778
Johnson	18-9-7	1	1,462
Devonian:			
Harjo	18-9-7	1	12
Gypsy:			
Harjo	18-9-7	1	360
Magnolia:			
Drewey	18-9-7	1	47
Prairie:			
Stubbs	18-9-7	2	15
Shaffer:			
Haigler	19-9-7	1	15
Sinclair:			
Coody	18-9-7	1	1,465
D. Coody	17-9-7	1	185
G. Johnson	18-9-7	1	...
Thompson (B)	18-9-7	1	1,047
J. Warrior	18-9-7	1	45
S. Warrior	17-9-7	1	67
Total		18	5,418

Searight Pool

Company, farm—	Location	Wells	Prod.
Amerada:			
Johnson	4- 9-6	1	23
Nicey	3- 9-6	1	46
Strothers	3- 9-6	2	275
Barnsdall:			
Jackson	5- 9-6	2	29
Burke-Greis:			
Varnum	32-10-6	1	...
Carter:			
Davis	4- 9-6	3	230
Frazier	3- 9-6	5	740
I. T. I. O.	11- 9-6	1	360
Kiker	3- 9-6	1	17
Mandler	3- 9-6	2	5
Skiff	10- 9-6	1	100
Scott	26-10-6	1	12
Slick	11- 9-6	2	1,250
Carter et al:			
Strothers	11-9-6	2	1,150
Steward	10- 9-6	1	385
Gypsy:			
Cudjo	4- 9-6	3	405
Nevins	32-10-6	2	397
Magnolia:			
Varnum	32-10-6	2	392
W. F. Varnum	5- 9-6	1	56
Mid-Continent:			
Grayson	34-10-6	4	20
Saloche	33-10-6	6	415
Mid-Cont. & Homa Okla:			
Nevins	32-10-6	4	1,170
Papoose:			
Marks	32-10-6	1	405
Pine:			
Lula	4- 9-6	1	15
Prairie:			
Cannon	33-10-6	1	2
J. Carter	10- 9-6	1	3
Houch	33-10-6	1	3
Hurford	33-10-6	1	...
Kincaid	33-10-6	2	60
Wimer	22-10-6	1	15
Pure:			
Aldridge	3- 9-6	4	785
Shell:			
Strothers	3- 9-6	4	173
Crump	32-10-6	1	5
Sinclair:			
Polly	2- 9-6	4	1,425
Superior:			
Varnum	4- 9-6	1	31
Texas:			
Fleet	4- 9-6	1	17
Twin States:			
Varnum	4- 9-6	2	125
Wilcox:			
Chupco	4- 9-6	7	201
Total		81	10,742

PRODUCTION OF ST. LOUIS POOL

Production of St. Louis Pool by companies and leases for July 25 follows:

S.T.R. Company, farm—	Wells	Prod.
16-7-4 Atlantic-Indep., Burke	1	460
20-7-5 Barnsdall, Stahl	3	767
25-7-4 Blackwell-Omar, Cherry	3	660
2-7-4 Carter, Akin	1	...
9-7-4 Darby, Nixon	2	30
16-7-4 Darby, Youngblood	4	653
17-7-4 Empire, Bettis	1	...
25-7-4 Gypsy, Bruno	4	102
25-7-4 Gypsy, Collins	4	538
26-7-4 Gypsy, Dodson	4	142
17-7-4 Gypsy, Green	2	1,082
23-7-4 Gypsy, LeClair	4	1,890
26-7-4 Gypsy, Roseman	4	515
30-7-5 Gypsy, Stahl	8	523

(Continued on Next Page)

Seven 500-Bbl. Maloneys erected by distributor, Maloney Sales Corporation, for T. B. Slick on the Linn Farm, at St. Louis, Okla.

Post your own price increase

Use MALONEY *Vapor-Pressure* flow and stock Tanks—and you'll be able to hold the gravity of your oil to a higher price differential.

MALONEY *Vapor-Pressure* Tanks are made of heavy gauge steel, strongly stayed with angle ties, and equipped with a pressure valve set at 1 pound and a vacuum relief set at ½-ounce. They prevent "popping off" during the heat of the day. Then all condensable fractions are recondensed back into the oil during the cool of the night.

As long as you can use or sell the gas from the wells, as long as pipe line companies buy oil on a gravity basis, it is money in pocket for operators to use MALONEY *Vapor-Pressure* Tanks.

"Alone in Quality"

MALONEY TANK MFG. COMPANY

Tulsa, Okla., U. S. A.

Distributors at All Principal Petroleum Points

MALONEY FEATURES:

1. Made of rust-resisting Keystone Copper steel.
2. Maloney patented close-fitting "crimp" seams and joints.
3. Maloney pliable rubber gasketing and Gaso cement.
4. All seams, including deck seams, reinforced with rigid steel channels.
5. Special bolts of 90,000 pounds tensile strength.
6. Large cleaning out plates set flush with bottoms.
7. Howell aluminum "4-in-1" Vacuum Pressure Valve and Thief Hatch.
8. Maloney special pearl gray paint.
9. Sizes 12 to 10,000 barrels.
10. Packed in steel-bound crates for export.

MALONEY PATENTED BOLTED COPPER-STEEL TANKS

MALONEY ALONE!

Company, farm—	Location	Wells	Prod.
14-7-4 Home Gas, Town Lot		1	280
17-7-4 Houston ,Wyatt		1	418
1-7-4 Independent, Borrow		2	1,063
30-7-5 Independent, Blandin		5	900
19-7-5 Independent, Youts		8	6,120
16-7-4 Indep.-Darby, Pappen		1	791
17-7-4 Indep.-Skelly, James		1	28
17-7-4 Indep.-Westland, Booze		1	45
16-7-4 Indep.-Westland, Rhodd		3	2,566
23-7-4 Inter-Ocean, McGee		6	250
35-8-4 I. T. I. O., Shobe		1	300
2-7-4 Irwin & Martin, Kelly		3	1,330
14-7-4 Magnolia, Banta		3	222
18-7-5 Magnolia, Brandenburg		5	1,349
13-7-4 Magnolia, Caudle		1	70
26-7-4 Magnolia, Cherry-A		5	792
26-7-4 Magnolia, Cherry-B		3	217
20-7-5 Magnolia, G. W. Fyke A		1	388
20-7-5 Magnolia, G. W. Fyke B		2	485
20-7-5 Magnolia, Tull Fyke B		2	582
29-7-5 Magnolia, Tull Fyke D		2	273
19-7-5 Magnolia, Hembree		4	336
18-7-4 Magnolia, Jones		1	135
17-7-4 Magnolia, Latimer		2	492
15-7-4 Magnolia, Richardson		1	87
15-7-4 Magnolia, J. M. Robbins		4	246
15-7-4 Magnolia, Pearl Robbins		1	53
24-7-4 Magnolia, Mary Wilborn		2	574
24-7-4 Magnolia, S. A. Wilborn		5	997
20-7-5 Magnolia, Chas. Youts		5	456
19-7-5 Magnolia, C. A. Youts		4	485
20-7-5 Magnolia, H. E. Youts		7	4,575
17-7-4 Magnolia-Pierce, Hubanks		2	1,067
25-7-4 McCullough-Blackwell, Bruno		5	955
25-7-4 McCullough-Mid-Cont., Smith		6	705
8-7-4 Mid-Continent, Decker		1	300
25-7-4 Mid-Kansas, Getzleman		4	905
30-7-5 Mid-Kansas, Lunay		3	345
25-7-4 Phillips, Cherry		2	160
2-7-4 Phillips, Grace		1	90
30-7-5 Phillips, Stahl		4	705
25-7-4 Prairie, Desmond		4	300
25-7-4 Prairie, Ellison		4	390
30-7-5 Prairie, Gammon		8	3,100
19-7-5 Prairie, Hembree		4	2,045
30-7-5 Prairie, Linn		4	675
29-7-5 Prairie, Wolfe		4	2,845
19-7-5 Prairie, Youts		4	275
18-7-5 Prairie et al, Davis		4	82
18-7-5 Prairie-Maud, Nesbit		2	305
17-7-4 Prairie-Shaffer, Cummings		2	640
17-7-4 Prairie-Shaffer, Rice		1	420
17-7-4 Prairie-Shaffer, Reagon		1	1,000
26-7-4 Pure, Dodson		2	126
26-7-4 Pure, Thomas		4	5,829
1-7-4 Pure, Tolen		1	224
23-7-4 Shaffer, Cherry		4	160
30-7-5 Shaffer, Tolen		4	450
24-7-4 Sinclair, Blandin		13	1,260
7-7-5 Sinclair, Brandenburg		3	895
26-7-4 Sinclair, Bruno		2	2,275
25-7-4 Sinclair, Gilbreath		2	1,030
29-7-5 Sinclair, Nadash		4	485
25-7-4 Sinclair, Nealy		5	222
25-7-4 Sinclair, Nealy B		2	715
18-7-5 Sinclair, Nesbit		8	1,530
19-7-5 Sinclair, O'Kitchee		7	390
2-7-4 Sinclair-McGrow, Kelly A.		1	1,340
26-8-4 Superior, Jackson		1	141
25-7-4 Texas, Cherry		4	830
18-7-4 Warner-Quinlan, Light		1	...
24-7-4 Westheimer-Daube, Fried.		5	690
Small Pumpers		110	3,466
Total number wells and production		387	73,434

Asher Pool

19-6-4 Commerce Devl., Townsite		1	...
19-6-4 Indep.-Twin State, Gardner		1	205
19-6-4 Prairie-Slick, Laster		4	3,266
19-6-4 Simms, Laster		3	6,355
19-6-4 Slick, Alexandra		1	35
20-6-4 Slick, Bledsoe		1	60
20-6-4 Slick, Weldon		3	50
19-6-4 Slick-Amerada, Walker		1	770
19-6-4 Texola, Townsite		1	340
Total number wells and production		16	11,080

North Sasakwa Pool

18-6-8 Prairie, Patton		1	75
7-6-8 Shell, Holatka		1	1,423
13-6-7 Signal, Bond		1	392
7-6-8 Sinclair, I. Davis A		4	7,314
Total number wells and production		7	9,204

TEXAS PANHANDLE

(Continued from Page 67)

4 Roach had an oil show at 1,252-62 feet and made 25 bbls. Humble Oil & Refining Co.'s No. 5 Kunkel had a big oil show at 1,179-81 feet and an initial production of 175 bbls. Magnolia Petroleum Co.'s No. 1 Portwood was dry and abandoned at 1,501 feet. Petroleum Production Co. and others' No. 6-B Kunkel flowed 175 bbls. at 1,161-83 feet. Its No. 7 Kunkel had a big oil show at 1,163-75 feet and at 1,176½-83 feet, with an initial production of 35 bbls. W. C. Young's No. 2 fee was dry and abandoned at 1,305 feet.

Cooke County

Danciger Oil & Refining Co.'s No. 1 Huggins had an initial production of 289 bbls. the first 24 hours, 327 bbls. the second 24 hours and 354 bbls. the third 24 hours, at 1,148-55 feet. Kewanee Oil Co.'s No. 6-B Timmis had an oil show at 1,156-76 feet, another big oil show at 1,280-86 feet and encountered saturated lime at 1,418-36 feet. This well made 4,370 bbls. the first 24 hours and 3,965 bbls. the second 24 hours.

Grayson County

F. H. E. Oil Co.'s No. 1 Getzendaner was dry at 859 feet.

Jack County

Panhandle Refining Co.'s No. 3 McKelvey found the oil and gas sand at 2,908-19 feet, was drilled to a total depth of 3,165 feet, plugged back to 3,044 feet and had an initial production of 30 bbls. Panhandle Refining Co.'s No. 3 Smith had an oil show at 2,955-58 feet. and at 3,118-20 feet, and was drilled to a total depth of 3,202 feet with an initial production of 95 bbls.

Montague County

Bridwell Oil Co.'s No. 3 Edmonson had an initial production of 25 bbls. at 1,085-94 feet and at 1,094-98 feet.

Young County

Bradstreet & Co.'s No. 3 Richardson had an initial production of 30 bbls. at 696-732 feet. Bridwell & Clark's No. 1 Cullers had an initial production of 10 bbls. at 606-618½ feet. Camp Oil & Gas Co.'s No. 1 Campbell was dry and abandoned at 963 feet. Parks and others' No. 3 Carpenter made 24 bbls. at 605-20 feet. Stafford's No. 1 Bentley was dry and abandoned at 586 feet. Stewart Wootin & Reed's No. 1 Andrews was dry and abandoned at 862 feet. Williams and others' No. 1 Drum was dry and abandoned at 605 feet. Panhandle Refining Co.'s No. 1 Wray was dry and abandoned at 4,952 feet.

Wilbarger County

Staley Wynne Oil Co.'s No. 10 Waggoner had an initial production of 80 bbls. at 1,864-79 feet and was drilled to a total depth of 1,886 feet. The Texas Company's No. 1 Waggoner was dry and abandoned at 2,000 feet. Waggoner Refining Co.'s No. 5 Waggoner had an initial production of 220 bbls. at 1,858-73 feet and was drilled to a total depth of 1,877 feet. Its No. 6 Waggoner made 200 bbls. at 1,882-1,901 feet.

Bradstreet & Grisham's No. 1 Waggoner had an initial production of 135 bbls. at 1,928-41 feet. Consolidated Oil Co.'s No. 7 Waggoner made 25 bbls. at 1,864-81 feet. Easter Oil Co.'s No. 1-E Waggoner had an initial production of 40 bbls. at 1,926-31 feet. Empire Gas & Fuel Co.'s No. 7 Waggoner had an initial production of 183 bbls. in 16 hours on pump at 1,805-06 feet and 1,817-42 feet. Fain-McGaha's No. 3 Waggoner topped the pay at 2,383 feet, was drilled to a total depth of 2,415 feet, plugged back to 2,412 feet and had an initial production of 37 bbls. Golding Cochran and others' No. 1 Waggoner was shot with 100 quarts at 2,295-2,315 feet, drilled to a total depth of 2,373 feet and had an initial production of 40 bbls. Grayback Development Co.'s No. 6 Boggy Creek Waggoner made 86 bbls. at 1,868-78 feet. King Royalty Co.'s No. 3 Waggoner made 80 bbls. at 1,866-73 feet. Lawson's No. 5 Waggoner had an initial production of 150 bbls. at 1,875-80 feet and 1,880-90 feet. Phillips Petroleum Co.'s No. 2 Waggoner was shot with 40 quarts at 2,370-96 feet and had an initial production of 194 bbls. Roberts Oil Co.'s No. 1 Waggoner had an initial production of 113 bbls. at 2,383-2,407 feet. Staley Wynne & Co.'s No. 8 Waggoner had an initial production of 75 bbls. at 1,830-58 feet.

Wichita County

Coleman Coppock's No. 21 Kemp-Kempner made 9 bbls. at 1,767-91 feet. Continental Oil Co.'s No. 14 Burnett made 30 bbls. at 1,632-38 feet and drilled to a total depth of 1,640 feet. Cooper & Mishler's No. 15 Waggoner Brothers had an initial production of 18 bbls. at 1,521-36 feet. Grayback Development Co.'s No. 1 Ferguson was dry and abandoned at 1,809 feet. Riner & Bailey's No. 8 Michie had an initial production of 94 bbls. at 1,774-90 feet. The Texas Company's No. 360 Waggoner was dry and abandoned at 2,006 feet. United Producers Co.'s No. 3 Allen Kemp was dry and abandoned at 1,756 feet. Its No. 1-A Munger made 25 bbls. at 1,750-55½ feet. Its No. 1-B Munger made 40 bbls. at 1,748-53 feet.

RANGER DISTRICT

Brown County

Brider trustees' No. 5 Cross had an oil show at 1,128-42 feet and an initial

VEZ

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THE VEZ COMPANY

Manufacturing Chemists

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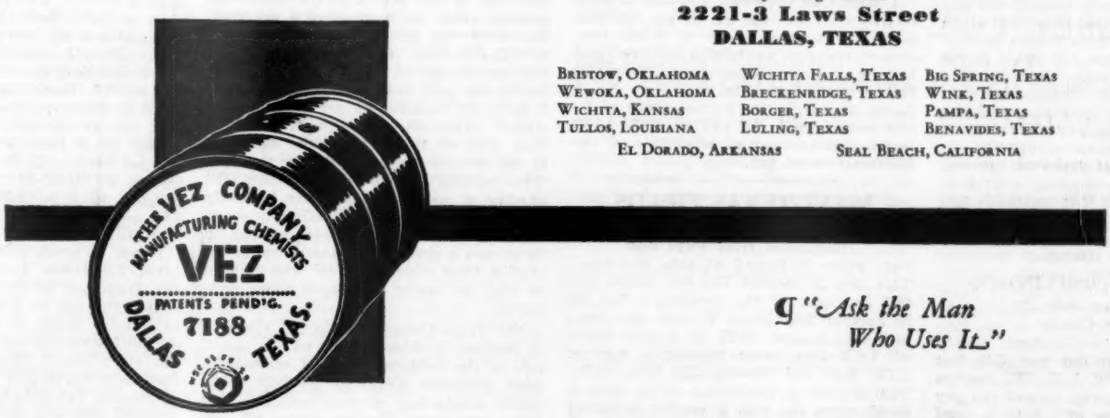
DALLAS, TEXAS

BRISTOW, OKLAHOMA · WEWOKA, OKLAHOMA · WICHITA, KANSAS · TULLOS, LOUISIANA
WICHITA FALLS, TEXAS · BRECKENRIDGE, TEXAS · BORGER, TEXAS · LULING, TEXAS
BIG SPRING, TEXAS · WINK, TEXAS · PAMPA, TEXAS · BENAVIDES, TEXAS
EL DORADO, ARKANSAS · SEAL BEACH, CALIFORNIA



¶ *"Ask the Man Who Uses It."*

production of 150 bbls. Humble Oil & Refining Co.'s No. 23 Armstrong had an oil show at 1,208-17 feet and was dry and abandoned at 1,258 feet. Lloyd Oil Corp.'s No. 3 Duff topped the pay at 1,146 feet, was drilled to a total depth of 1,156 feet and had an initial production of 120 bbls. H. A. Beasley's No. 1 Bell was dry and abandoned at 530 feet.

Callahan County

Bradstreet & Holden's No. 3 Cavenough had an oil show at 1,632-71 feet, was drilled to a total depth of 1,672 feet, shot with 30 quarts and had an initial production of 70 bbls. A. J. Bremen's No. 2 Biggerstaff was dry and abandoned at 710 feet. Condor Petroleum Co.'s No. 1 Windham was dry and abandoned at 1,607 feet. Cook and others' No. 1 Cook was dry and abandoned at 812 feet.

Coleman County

Chapman and others' No. 3 Fuller, Jr., was dry and abandoned at 1,562½ feet. S. B. Owens, Inc.'s No. 1 Parker was dry and abandoned at 1,957 feet.

Erath County

T. W. Owens' No. 1 Ray had a small show of oil at 3,675 feet and was dry and abandoned at 3,782 feet.

Eastland County

Conway Brothers & Champion's No. 5 Simmons was dry and abandoned at 1,157 feet after having an oil show of 1,132-40 feet. Belva Oil Co.'s No. 8 Good had an oil show at 3,500-25 feet, was shot with 45 quarts at that depth, was drilled to a total depth of 3,525 feet and had an initial production of 140 bbls. oil and 4,000,000 feet of gas.

Palo Pinto County

Prairie Oil & Gas Co.'s No. 1 Montgomery made 55 bbls. at 1,377-91 feet.

Stephens County

Clark and others' No. 1 Creagh was dry and abandoned at 4,523 feet. Lone Star Gas Co.'s No. 2 Brooks had an oil show at 2,137-45 feet and an initial production of 16,389,000 feet of gas. Norman Bob and others' No. 1 Glasscock had an oil show at 1,700 feet, was drilled to a total depth of 1,725 feet and an initial production of 1,332,000 feet of gas. Texas Consolidated Oil Co.'s No. 1 Curry was shot with 40 quarts at 3,148-98 feet and had an initial production of 20 bbls.

Shackelford County

Ackerman & Scrivner's No. 1 Hill location was abandoned. Big State Oil Co.'s No. 9 Russ-Webb had an oil show at 774½-95½ feet, was drilled to a total depth of 797 feet and had an initial production of 40 bbls. J. L. McMeans' No. 2 T. J. Crow was dry and abandoned at 609 feet. Roeser & Pendleton and Continental's No. 43-A-61 Cook had an initial production of 50 bbls. at 1,209-23 feet. Their No. 44-A-61 Cook made 40 bbls. at 1,342-54 feet. Their No. 14-A-62 Cook was dry and abandoned at 1,418 feet. Their No. 5-A-88 Cook was estimated as making 12,000,000 feet of gas and spraying oil at 1,384-88 feet. Their No. 8-A-88 Cook topped the pay at 1,388 feet, was drilled to a total depth of 1,410 feet and had an initial production of 15,000,000 feet of gas. Harry Schulman's No. 1 Green was dry and abandoned at 612 feet. Simms Oil Co.'s No. 1 Dyer was dry and abandoned at 1,160 feet. Tannehill Oil Co.'s No. 22 Newell had an oil show at 917-37 feet, was drilled to a total depth of 940 feet and had an initial production of 67 bbls. Vacuum Oil Co.'s No. 4-C Matthews had an oil show at 1,151-68 feet, was drilled to a total depth of 1,169 feet and had an initial production of 100 bbls.

PANHANDLE COMPLETIONS

Week ending July 27

Carson County

Delmar Oil Co.'s No. 4 Noel, located 330 feet from north line and 330 feet from west line of W half SE, Section 198, I.&G.N.R.R. Survey, topped the pay at 3,231-39 feet, was drilled to a total depth of 3,239 feet and had an initial production of 875 bbls. Travis and others' No. 1 D. A. Harrell, located C NE NE, Section 162, Block 7, I.&G.N.R.R. Survey, was dry and abandoned at 3,760 feet.

Gray County

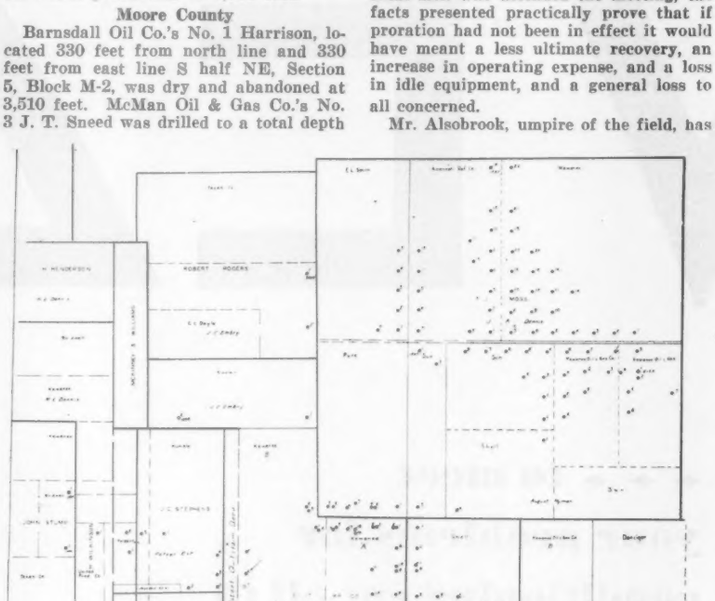
McMan Oil & Gas Co.'s No. 2 G. H. Saunders was drilled to a total depth of 2,690 feet, topped the pay at 2,669-78 feet and at 2,685-90 feet and had an initial production of 1,700 bbls. Sun Oil Co.'s No. 2 Purviance and others, located 250 feet from south and 287 feet from west Section 61, Block B-2, H.&G. N.R.R. Survey, was drilled to a total depth of 2,932 feet, topped the pay at 2,825-90 and 2,920-32 feet and had an initial production of 475 feet. McMan Oil & Gas Co.'s No. 1 Palmer was drilled to a total depth of 2,914 feet, topped the pay at 2,897-2,914 feet and had an initial production of 400 bbls. Its No. 2 Palmer was drilled to a total depth of 2,930 feet, topped the pay at 2,907-30 feet and had an initial production of 1,200 bbls. The Texas Company's No. 5 Cook-Faulkner was drilled to a total depth of 2,930 feet, topped the pay at 2,867-70 feet and had an initial production of 1,785 feet.

Moore County

Barnsdall Oil Co.'s No. 1 Harrison, located 330 feet from north line and 330 feet from east line S half NE, Section 5, Block M-2, was dry and abandoned at 3,510 feet. McMan Oil & Gas Co.'s No. 3 J. T. Sneed was drilled to a total depth of 3,090 feet, topped the lime pay at 3,087-90 feet and had an initial production of 35 bbls. oil and 20 bbls. water. Phillips Petroleum Corp.'s No. 5 Sneed location was abandoned.

Wheeler County

Upham Gas Co.'s No. 3 Gooch, located C SW SW, Section 81, Block 23, was drilled to a total depth of 1,387 feet, topped the pay at 1,295-1,380 feet and had an initial production of 28,000,000 feet of gas. Lone Star Gas Co.'s No. 1 Lamb was drilled to a total depth of 1,889 feet, topped the pay at 1,460-1,782 feet and had an initial production of 14,000,000 feet of gas.



Plat showing the Kewanee Oil & Gas Co.'s No. 6-B Timmis (Hyman) the phenomenal well of Cooke County in the Bulcher Pool. Oil sand was struck from 1,156-76 feet, broken sand from 1,280-86 feet, and lime from 1,418-36 feet. The first 24 hours it flowed over 4,300 bbls. Total depth is 1,466 feet.

WEST TEXAS FIELDS

(Continued from Page 66)

feet, where it flowed 45 bbls. per hour. This well is located 770 feet north and 660 feet east of the company's No. 24 in Section 200, Block F, and was completed in August, 1927, at a total depth of 2,873 feet, after topping a pay at 2,739 feet and flowing 550 bbls. daily. The increase in production at the greater depth gives the pool a greater potential possibility, and there is a big probability that the company will drill its many wells deeper as they begin to slump off and show a decline in production from their present depths and pays. Drilling wells deeper seems to be the new fad in West Texas, and will no doubt be practiced by all operating companies in the pools if they consider their own wells possibly benefited by such deepening, and in most cases of the past in the various pools, deepening has really proved itself worth the expense and experiment.

Winkler Proration Upheld

The Railroad Commission of the State of Texas and representatives of the operators in the Hendricks Pool, Winkler County, met at the Texas Hotel, Fort Worth, Tex., July 24, for the considering of adopting rules deemed necessary to prevent waste and conserve the natural resources of crude oil and natural gas in the Winkler County Field, and as a result of the meeting the present system of proration was unanimously agreed upon by all the representatives present as necessary to the welfare of the field. From the testimony offered by the technical men who attended the meeting, the facts presented practically prove that if proration had not been in effect it would have meant a less ultimate recovery, an increase in operating expense, and a loss in idle equipment, and a general loss to all concerned.

Mr. Alsobrook, umpire of the field, has drawn a graph showing figures covering the three monthly periods of proration. The first period of three months, from October 1 to December, 1928, shows that of a total number of wells 64 per cent were making water of some amount. At the close of this period 68 per cent were making water, an increase of 4 per cent. The field was later given an allowance of 175,000 bbls. daily production, and the percentage of wells showing water during the next period showed a gain of 8 per cent, making 76 per cent making water. Allowable daily production was then reduced to 150,000 bbls. daily, as at the present time, and during the past three months, up to July 1, 1929, the number of wells making water had only only increased 1 per cent, definitely showing that when the wells were opened up there was a greater amount of water intrusion than when the field was pinched in and the water prevented from coming in.

The Texas Company's No. 2-A Cowden, in Section 3, Block B-12, on the south side of the field, was a good example of what proration means to the field. The initial production of this well was 200 bbls. per hour, flowing open, 85 per cent water, and when it was pinched in for proration purposes it showed 95 bbls. per hour with the water decreased to 25 per cent.

Gulf Production Co.'s No. 7 Hendricks, which was one of the first wells in the field, was offered as an example from an oil and gas ratio standpoint. With the well flowing open the pressure was 130 pounds with 1,550 feet of gas per barrel of oil, and when the well was pinched to its allowable amount the gas was reduced to 970 feet per barrel and the water was reduced to 3 per cent, whereas when open it produced 15 per cent water. This showed a considerable saving in gas per barrel by the proration plan.

Of the 582 wells producing in the Winkler Field, 197 still show pressures in excess of 100 pounds, and some run as high as 700 pounds. In October, 1928, of the 363 wells producing, 64 per cent were making water. The daily allowance then was 175,000 bbls. On July 1, 1929, of the 584 producing wells, 77 per cent were making water; this was figured on the present daily allowance of 150,000 bbls.

Continental Oil Co.'s No. 1-B University, Texon Oil & Land Co.'s No. 1-B University, went to a new peak of 2,725 bbls. of oil and 24,934,000 feet of gas during the week; daily average for the week making 2,715.9 bbls. of oil, and 25,124,000 feet of gas. This is the world's deepest producer, located in Reagan County, Texas.

WEST TEXAS COMPLETIONS

Week Ending July 27

Garza County

Emerald Oil Co.'s No. 1 Reed, located 330 feet from south, 990 feet from east of Section 135, Block 5, topped the lime at 1,325 feet, topped the pay at 2,532 feet, was drilled to a total depth of 2,546 feet, plugged back to 2,543 feet and had an initial production of 30 bbls.

Irion County

Whitmier's No. 3 Meyers, located 350 feet from north, 850 feet from east of Section 11, Block 2, was dry and abandoned at 1,548 feet.

Jones County

White Eagle Oil & Refining Co.'s No. 1 Teague was dry and abandoned at 2,785 feet. Kneply and others' No. 1 Horn was dry and abandoned at 2,902 feet.

Howard County

Moody Oil Corp.'s No. 15-B Roberts, located 2,310 feet from north and 380 feet from west, Section 137, Block 2, made 150 bbls. at 2,595-2,636 feet. Its No. 15-E Roberts, located 990 feet from north, 330 feet from east of Section 136, Block 29, topped the pay at 1,352 feet, was drilled to a total depth of 1,433 feet and had an initial production of 125 bbls. Its No. 18-E Roberts, located 2,310 feet from north and 990 feet from east of Section 136, Block 29, made 50 bbls. at 1,333-1,415 feet. Amerada Petroleum Corp.'s No. 11 Roberts, located 665 feet from south and 622 feet from east of Section 128, Block 29, topped the pay at 1,303 feet, was drilled to a total depth of 1,360 feet, plugged back to 1,341 feet and had an initial production of 30 bbls. Cosden & Co.'s No. 5-A Roberts, located 200 feet from south and 2,440 feet from east of Section 129, Block 29, had a gas show at 1,472 feet, an oil show at 1,485 feet and was dry and abandoned at 1,511 feet. Gibson-Johnson's No. 1 Reed, located 660 feet from south and east of Section 47, Block 30, Township 1n, T. &P.R.R. Survey, topped the lime at 1,900 feet, had an oil show at 2,690 feet, was drilled to a total depth of 2,955 feet, plugged back to 2,730 feet, shot with 120 quarts at 2,902-40 feet, it was again plugged back to 2,730 feet, shot with 110 quarts at 2,680-2,720 feet and dry and abandoned.

Owen & Sloan's No. 11 Roberts, located 2,310 feet from south and 1,040 feet from east of Section 136, Block 29, topped the pay at 1,345 feet, was drilled to a total depth of 1,402 feet and had an initial production of 10 bbls. Ward Oil Co.'s No. 7 Roberts, located 2,310 feet from south and 380 feet from east of Section 137, Block 29, topped the pay at 2,565 feet, was drilled to a total depth of 2,645 feet, was shot with 200 quarts at 2,610-45 feet and had an initial production of 150 bbls.

Pecos County

Plymouth Oil Co.'s No. 2 Perry, located 330 feet from south and west of Section 39, Block 178, topped the salt at 1,160 feet, topped the pay at 1,787

feet, was drilled to a total depth of 1,858 feet, plugged back to 1,845 feet and had an initial production of 47 bbls. Shell-Kirby Oil Co.'s No. 1 University, located in Section 23, Block 26, topped the lime at 792 feet, found sulphur water at 775 feet and was drilled to a total depth of 5,203 feet. Stine and others' No. 1 Pecos Valley, located in Section 34, Block 3, was shot with 30 quarts at 1,540-70 feet and had an initial production of 16 bbls. Tidal Oil Co.'s No. 1 University, located in the C SW, Section 16, Block 20, topped the lime at 1,270 feet, was drilled to a total depth of 1,602 feet and was dry and abandoned with hole full of sulphur water. Ditto Oil Co.'s No. 1 Montgomery, located 250 feet from north, 160 feet from east, Section 104, Block 331, was dry and abandoned at 1,505 feet. McMan Oil & Gas Co.'s No. 6-C Smith, located 2,127 feet from north, 1,740 feet from west of Section 25, Block 194, was shot with 35 quarts at 1,742-56 feet and had an initial production of 25 bbls. Its No. 7-C Smith, located 1,997 feet from south, 660 feet from east of Section 25, Block 194, topped the salt at 990 feet, topped the lime at 1,460 feet, topped the pay at 1,530 feet and was drilled to a total depth of 1,635 feet and had an initial production of 100 bbls. Rio Pecos Oil Co.'s No. 2 Yates, Section 543, Block 1, was dry and abandoned at 1,336 feet.

Ward County

Gulf Production Co.'s No. 5 O'Brien, located 2,310 feet south and 330 feet west of Section 18, topped the pay at 2,595 feet, and flowed 120 bbls. the first 12 hours.

Winkler County

Humble Oil & Refining Co.'s No. 1-A Walton, located 2,310 feet from south and 330 feet west of Section 48, Block 26, Public School Land, was shot with 300 quarts at 2,850-3,000 feet and had an initial production of 165 bbls. daily. Skelly Oil Co.'s No. 2-C Hendricks, located 1,265 feet south and 2,310 feet east of Section 10, Block B-12, topped the lime at 2,636 feet, had an oil show at 2,810-20 feet, gas show at 3,100 feet and was dry and abandoned at 3,155 feet. Southern Crude Oil Purchasing Co.'s No. 7 Hendricks T-88-H, located 2,310 feet south, 990 feet west of Section 28, Block B-5, had an initial production of 16 bbls. of oil at 2,990-3,208 feet. Its No. 6 Hendricks T-67-2-D, located 2,310 feet south, 990 feet west of Section 28, Block 26, topped the pay at 2,858 feet, was drilled to a total depth of 2,960 feet, and had an initial production of 360 bbls., 85 per cent water. Its No. 34 Hendricks T-88-M, located 1,980 feet south and 990 feet east of Section 33, Block 26, topped the pay at 2,668 feet, was drilled to a total depth of 2,730 feet and had an initial production of 17,975 bbls.

SHOULD SOLVE ITS OWN PROBLEMS—WILBUR

(Continued from Page 37)

could put into effect. There had been just criticism that while the oil board was admonishing the producing industry in the interest of a rational system for operating oil fields the government itself was one of the chief offenders in that when permits were granted in the discretion of the President the General Leasing Act of 1920 required the permittee to act with promptness and to produce oil when discovered whether it was needed or not. That was an effect of the law which probably was not foreseen. It is just as wrong to enforce production of oil from government land when not needed as it is to force production from private land. It makes no difference whether the unnecessary production is brought about by law or whether it is the result of rivalry and uneconomic competition among private owners. Fortunately, the granting of these permits was within the discretionary power of the President and that wasteful methods could be stopped as they have been.

"Just how the public oil domain will be administered after our conservation policy has been formulated it is not now possible to say. The first thing to be done will be to bring the several oil producing states into agreement so that they may adopt similar laws regulating the control of drilling, and especially the prevention of waste of natural gas so important in bringing about the largest possible recovery of oil from the sands. That discussion is now going on. As I stated at Colorado Springs, the thought of the administration was not to centralize power in Washington but to assist in the conservation of oil. The fact that the word coercion was used during the discussion there has been overworked and made to play a role that was never intended. We do not characterize regulatory laws of the States or of the Federal Government as being coercive. The states regulate many industries and the oil industry itself, finding it difficult to put its own ideas of conservation into effect, I am sure will welcome assistance from the states and if in the judgment of those best qualified to express opinions it is necessary to form interstate compacts to comply with Federal law and constitutional limitations I am sure the industry will approve that course.

"California has enacted natural gas legislation and we must see how that legislation works before a decision can be made favoring similar legislation in other oil states. Other measures will have to be adopted after careful consideration but I think there is a clearer appreciation of the various forces that are at work in the oil business than there was before the meeting at Colorado Springs. As a matter of fact it all depends upon how well the difficulties to be overcome are understood. I think a good many people have a clearer understanding of these difficulties than prevailed at that conference.

Matter of Another Conference

"There is no intention of calling another conference until sufficient progress has been made in formulating plans to give assurance that something tangible can be done and I have no idea when that will be. I sincerely hope that the oil industry will face its problems and prepare for emergencies of overproduction in new fields before problems of that kind arrive. A large amount of capital, time and energy are necessary for an expensive drilling operation and before it is undertaken there should be co-ordination of all the forces involved. We must remember that an oil field will work according to the laws of physics and not according to our ideas."

Reference was made to another difficulty of the oil industry in the continuing duplication of service stations throughout the country piling up a large overhead which the sale of gasoline must meet.

"I think that if that situation grows the licensing power of the states will be invoked to care for that problem," said Secretary Wilbur.

"In some places you will find a single gasoline service station with a half a dozen or more pumps which supply as many different kinds of gasoline. There is no reason why each company should not show up the advantages of its own products by any method it pleases and when the motorist comes to a service station he can select whatever brand of gasoline he prefers. This method would surely avoid the necessity of having duplication of service stations in a single location and it might readily be brought about to the advantage of the public by the states controlling the situation by means of license laws."

West Texas Chapters Formed by Engineers at Midland Meeting

MIDLAND, Tex., July 29.—Five chapters of the production and engineering division of the American Petroleum Institute, Texas, Louisiana and Arkansas district, were created at Midland Saturday at the district meeting. Midland was made the main chapter with the other four as co-ordinating units.

C. W. Alcorn, assistant state manager of the Shell Petroleum Corp. with offices at Midland, was elected vice president of the Midland chapter and is chairman in charge of the Midland organization and general chairman of the other four chapters.

Chapters other than the headquarters body at Midland were established at McCamey, Wink, Big Spring and in the Yates Pool. Mr. Alcorn was authorized by vote of the group Saturday to appoint vice presidents and secretaries of the McCamey, Wing, Big Springs and Yates chapters.

Periodical meetings will be held by the various chapters, which were created as a matter of convenience for the oil men of the various West Texas and eastern New Mexico fields. Study at these meetings and in all other meetings of Texas, Louisiana and Arkansas between now and the winter meeting of the entire district at Galveston will be principally devoted to repressuring in the fields, according to C. A. Young, director of the division of standardization of the A.P.I.

The program at Midland was mainly a discussion of the various assigned papers, with emphasis on the papers on drilling straight holes as presented by W. W. Warner of the Amerada Corp. and proper care of sucker rods as prepared by E. S. Durward of the Shell Petroleum Corp. and read by J. A. Schutt of the Humble Oil Co.

Other papers were given by George L. Klingman of the California Co. on "Oil and Gas Ratios in the Yates Pool," and by E. N. Van Duzee and E. L. Davenport of the Shell Petroleum Corp. on "Methods of Waste Water Disposal in Winkler County." An informal discussion was held on "Metallurgy of Drilling Tools."

About 75 oil men from the West Texas Permian Basin and eastern New Mexico attended the meeting.

A. S. Fields, chairman of the A.P.I. division and Director C. A. Young were here from Dallas to assist in the meeting, which was presided over by Mr. Alcorn. W. W. Scott, chief engineer of the Humble Oil Co. and Melbert Schwartz, chief engineer of Rio Bravo company were here from Houston to attend the meeting.

IMPORTANT CHANGES FOR ETHYL GASOLINE

(Continued from Page 130)

by the enthusiastic backing and co-operation among those who are financially interested in the promotion of the sales of gasoline containing Ethyl Fluid.

COST OF TREATING 1 GALLON OF ETHYL GASOLINE

	¾ cc.	1	1¼	1½	1¾	2	2¼	2½	2¾	3
Present basis minimum of ¾ cc. of lead										
Gallonage .7c	1.075	1.2	1.325	1.45	1.575	1.7	1.825	1.95	2.075	2.2
Lead .5c										
New basis minimum of 1 cc. of lead										
Gallonage .6c										
Lead .4c	.....	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8
Additional ¼ cc. @ .4c means to each customer additional 1/10c per gallon treated	.....	.1	.1	.1	.1	.1	.1	.1	.1	..
		1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.8

COMPARISON BETWEEN OLD AND NEW STANDARD

Gallonage .7c										
Lead .5c	1.075	1.2	1.325	1.45	1.575	1.7	1.825	1.95	2.075	2.2
¼ .6c										
Increase .4c	1	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.8
Difference in favor of customer with new basis and increased standard	0.075	.1	.125	.15	.175	.2	.225	.25	.275	.4

MINOR CHANGES IN OKLAHOMA PRICES

(Continued from Page 36)

refineries. All the export purchases were for prompt delivery at Gulf Coast terminals.

Spot Market

Although this export buying brought a better feeling among sellers, it cannot be said that the spot market on the 58-60 U. S. Motor grade has improved. Many refiners report a better contract movement of this grade, and most of the larger refiners are quoting 8 cents to the trade on spot shipments, a price established a week ago. There is not the uniformity among the larger refiners as to prices that there has been in the past. In two or three cases at least these refiners have established a policy of "meeting competitive prices." Representatives of these companies state that they have lost large jobber customers in the past few weeks to competitors who were quoting from one-quarter to three-quarter cent under their prices. They are endeaving to secure the return of this business.

Continued complaint is heard to the effect that the low priced material is "off specifications." The lowest priced gasoline is unquestionably coming from plants which have difficulty in meeting all the generally accepted specifications for U. S. Motor gasoline. However, there are other refiners with specification gasoline who have been compelled to lower their prices from one-quarter to three-quarter cent under the general market to secure spot sales. Most of the off brand gasoline is coming from new cracking processes. This is particularly true of some new installations in West Texas and Arkansas. This is probably a temporary situation, as other refiners with older plants have been able to secure quality material in their operations. It should be stated in this connection that while this condemned gasoline in some cases does not have the required distillation range and color with a high sulphur content, it does have a high antiknock rating. This assures a strong demand when the other difficulties have been solved.

Gasoline and Naphtha

The Monday sales of U. S. Motor gasoline on which the weighted average prices are based in this issue, varied from 7½ to 8¼ cents, with three companies failing to make any spot sales. Refiners with their own stations and jobbers report a heavy retail business. The tourist business is exceptionally heavy in several sections. This consumption is reflected in the contract movement from Oklahoma refineries, but competition for spot business continues keen. Outside of the export business previously explained, there is nothing new in the high gravity gasolines. There is practically no spot demand for these grades, and the price range as quoted by Oklahoma refiners varies 1¼ cent a gallon.

Refiners for several days have been primarily interested in August business, which gets under way on Thursday. Some sales have been reported for all or part of August at the prevailing market of the past few days. For instance, one U. S. Motor purchase was made over the first 15 days at 7¼ cents, and another at 7½ cents. Most of the refiners prefer to await developments rather than speculate in August sales. With a heavy domestic demand assured and the possibility of additional export business, most of the refiners feel that prices in August will not go lower.

Kerosene and Distillate

The general situation in regard to distillate and kerosene has been explained. One refiner on Monday reported several inquiries for 5 to 10 car orders for August delivery. These buyers are not asking price concessions and are willing to pay the published spot prices. Prices range from 3 to 4 cents, with several sales of 38-40 straw distillate at 3¼ to 3⅜ cents reported.

A few sales of 41-43 water white kerosene at 5⅛ cents were reported the past week, with a price range up to 5½ cents

for this grade. The price range on the 42-44 grade varies from 5½ to 6 cents. One export purchase of 100,000 gallons was reported in North Texas.

Natural Gasoline

Prices on natural gasoline are steady and have been for several days. The export buying of high gravity refinery gasoline aided the natural market as one refiner is reported to have purchased 300,000 gallons to blend with export gasoline.

On Monday and Tuesday the spot market was dull, but prices were unchanged from Saturday quotations.

Fuel Oil and Gas Oil

Fuel oil and gas oil prices are unchanged. Inquiries are being received for the high gravity grades above 26. The same is true of the better grades of gas oil. These inquiries are coming from buyers who are seeking furnace oil.

Lubricants and Wax

A continued tight steam refined cylinder stock and bright stock market is in prospect for August. Some of the manufacturers are practically sold up, and will only have an occasional car or two to offer during the month. Neutral oils are easier with no price changes. Prices on wax over the past week were nominal, as few sales were made.

A.P.I. ADOPTS PLAN ON CODE OF ETHICS

(Continued from Page 48)

national committee on interpretation which should promptly make the interpretation. A brief statement of the facts and the interpretation of the committee shall be published in the institute's bulletin for the information of the industry; (c) if the complaint be against a competitor for violation of any provision of group one of the code and the conciliatory effort of the subcommittee on conciliation fails its chairman may transmit to the executive vice president of the institute a full and complete statement of the facts and a copy of such statement shall be by him mailed to the Federal Trade Commission for its information; (d) if the complaint be against a competitor for violating any rule or all the rules in group two of the code and the conciliatory effort of the subcommittee on conciliation fails, with the approval of the subcommittee its chairman may submit (through the executive vice president of the institute) to the national committee on interpretation a full statement of all the facts with the recommendation that in a marketing area which shall be specifically defined operation of the group two provisions of the code may be suspended and if such recommendation is approved by the national committee on interpretation it shall thereupon take effect and the group two rule or rules of the code in the specifically defined marketing area shall be temporarily suspended until such time as the subcommittee on conciliation shall report that the violator or all important competitors in such area are conforming to the rules as set forth in group two.

6. No formal complaint shall be filed in the name of or prosecuted on behalf of the institute with the Federal Trade Commission against any person or company. Formal complaints, if any, should be filed and prosecuted by individuals or competitive companies.

RIO GRANDE'S NEW OIL LOADING TERMINAL HAS LATEST FACILITIES

By L. P. Stockman

LOS ANGELES, Calif., July 27.—Within a few days the first tanker will unload at the latest and what is claimed to be the most modern oil loading terminal in the world, located at Los Angeles Harbor. This $2,000,000 terminal, the property of the Rio Grande Oil Co., broke ground practically four months to the day of its completion, and in oil handling facilities, fire prevention, accessibility and economical operation represents a most progressive step in this branch of the oil industry.

Some conception of the efficiency with which this plant has been laid out may be gained from the fact that a gigantic tanker can tie up in 10 or 15 minutes and be loaded and unloaded with the aid of only two terminal men in a few hours. The enormous cargo is silently pumped to or from the boat's compartments by these two men who have but to make the proper connections, press a series of electric switches and gauge the flow.

This terminal is now one of the strategic oil shipping points for southern California. The harbors of San Pedro (Los Angeles Harbor) and Long Beach form part of a long crescent facing south into the Pacific. The Rio Grande terminal lies a few hundred yards east of the technical dividing line for the two harbors, at a point where Channel No. 2 of the Long Beach Harbor touches the mainland. A railroad siding runs alongside the terminal. The terminal can be reached by boats in two ways, either through the San Pedro Harbor or through the open waterway beyond Long Beach. A large turning basin several hundred yards from shore provides convenient space for the handling of tankers.

The site for the Rio Grande terminal lies about 22 miles directly south of its refinery at Vinvale, Calif., just east of the town of Downey. When the ground was purchased for the terminal four months ago, it was part of a drab expanse of harbor land. Now 12 steel tanks rear above the big retaining wall, which surrounds almost the entire 14 acres of the terminal, while along the east side of the wall runs a wide roadway, and running off the roadway are two of the most up to date loading docks yet devised, one about 250 feet and the other 150 feet long. It is the plan of the company to landscape the entire property with grass and shrubbery and 3,500 feet of paved roadway will be laid down. The 12 tanks inside the retaining wall represent a storage capacity of 500,000 bbls. Outside of the wall, at the entrance to the property, is the high pressure pumping system for forcing the petroleum to the Vinvale refinery, 22 miles away. High voltage wires run to this plant. This current actuates in the high pressure pump house four motors, each 250 horsepower, 4-stage compression, two motors being attached to each of the two pumps. These pumps can take the contents of a tanker, say 60,000 bbls., and force it up the 22 miles to Vinvale in four or five hours. It is interesting to note that the crude travels, because of its high content of volatiles, much more rapidly than fuel oil coming down from the refinery which would take about 24 hours to move the same volume. The fuel oil coming down is, of course, pumped from the refinery end, and is heated and stepped up by two booster plants located on the Rio Grande property in Signal Hill.

Three lines connect with the high pressure pump house. One for crude going up, and two for refined products coming down. Of the two intake lines, one runs only from the Signal Hill properties of the Olympic Refining Co., where it enters the pipe line system. The pipe lines represent about $500,000 investment.

After the fuel is stored in the tanks it is handled by the low pressure pump house located half way down the terminal against the fire wall. The pumps draw oil and gasoline from the tanks to the tankers or vice versa. The pump house is divided into two sections, one for the heavy oils and the other for the lighter oils and gasoline. There are six pumps in one side for the lighter materials, and two heavy oil, 14-inch centrifugal pumps in the other, each of which is actuated by a 250-horsepower motor. All eight pumps are separately motorized but each motor can be switched to any one of the other pumps. The two heavy oil pumps make about 8,000 bbls. per hour each, and when coupled together move about 22,000 bbls. per hour. The two 14-inch gasoline pumps, with their 250 horsepower motors, can singly make 6,000 bbls. per hour, or together about 20,000 bbls. Pumps working together more than double their single capacity. The other pumps are for kerosene, Diesel oil and other products, to refuel tankers or small harbor boats.

The terminal is under the supervision of J. J. Downey, chief engineer for the Rio Grande Oil Co., and construction work was supervised by W. C. Farquhar, engineer. Capt. M. M. Walk will be marine superintendent in charge.

Late Fields

(Continued from Page 48)

SE cor. SW SE, Section 8-14-4, Lincoln County, made 1,322 bbls. on the 24-hour gauge of July 30. The well was flowing by heads, with no water showing.

Magnolia Petroleum Co.'s No. 1 Noble, NW cor. SW SW, Section 30-12-2w, cored the sand at 6,320-37 feet. The top of the lime was 6,317 feet. When the tools were pulled out the well blew in, estimated to be making 4,000,000 feet of gas. This is a wildcat 6 miles north of the main part of the pool.

KANSAS

The new Rice County wildcat, Higgins & Steinbuchel's No. 1 Shurr, NE cor. NW, Section 21-20-10w, is expected to be a 100-bbl. well when completed. It produced 148 bbls. on the swab in seven hours on the gauge of July 27, when it lowered the fluid 600 feet off bottom. On July 28 it filled up 2,100 feet, in 22 hours and swabbed 68 bbls. in 3 hours, lowering the fluid to 1,200 feet off bottom. The test is making its production through 15 feet of caving in the hole.

GULF COAST MARKETS

HOUSTON, Tex., July 30.—No important changes were indicated in Gulf Coast lubricating oil, fuel oil or gas oil markets the past week. The opening of this week found pale and red oils steady, fuel oils plentiful but being held in price, and gas oils firm. Pale and red oils continued to move fairly freely, except on the lower viscosity grades, but while quotations Tuesday were being held it was felt that these prices were at a peak.

OIL LEADERS MEET IN LONDON; FRENCH DISPLEASED OVER MOSUL

NEW YORK, July 29.—Two meetings of American and British oil leaders have already taken place in London, according to the New York Times correspondent, and at least two more conferences will be called.

Officially the meetings are called to consider the possibility of an agreement upon the territorial divisions among the members of the American Petroleum Export Association, formed last January.

At the two meetings the report says: "The Americans felt out the British for a reaction to the possibility of raising the price of gasoline and eventually standardizing it universally. That reaction was negative. The British oil group found it strange that this should be raised when the British attitude is that, if there is any change in prices, they should be reductions. They declare that the Royal Dutch Shell and the Anglo-Persian are selling gasoline throughout England and the Continent at a good price, and the buying public would not accept an increase. If the American export prices do not allow America sufficient profit on the British sales, they should reduce the export price, declare the British, rather than to increase the retail price.

"The British attitude to the American oil men's complaint that they are losing money in the British trade is, first, that the United States is producing too much crude oil, instancing that the United States expected to put out 3,000,000 bbls. daily in the near future, which is forcing down the retail prices, and, second, Dutch Shell and the Anglo-Persian can sell to Europe at a good profit at the present prices, thus cutting out American competition. Every week England hears of a new record output of American oil. This is fatal to the American case, the British experts claim. Production restrictions, they claim, should be universal to have any good effect. Restriction is the only way to reduce operating costs, say the British. When this is done, profits will return, and even the reduction of retail prices will be possible. The present retail price of gasoline in England averages 35 cents a gallon, as compared with 19 to 22 cents in America.

"Sir John Cadman and Sir Henry Deterding are both trying to restrict the conferences to the market quotas and provision of supplies from the nearest source. They say that once these problems and production restriction are solved, the question of price standardization will adjust itself."

European nations which produce no oil, France, Germany, Italy and Spain, are concerned over the possible outcome of the conferences. The French Foreign Office has been feeling out other non-producing countries with a view to a mutual defense of their interests.

Another source of resentment in France and, to a lesser degree in other Continental countries, is the disillusionment over development of Mosul oil fields. The hopes of freeing France from foreign oil control by means of the oil to be taken from the Mosul must, it seems, be set aside for some years to come. Under the San Remo accord of 1920, France received a little less than one-quarter interest in all the oil to be taken from the Mosul fields, sufficient to take care of practically the entire French consumption. Since then, however, no progress has been made toward the construction of a pipe line to the Mediterranean port. The British and American companies dominate the situation and, although plans for the pipe line have been drawn up, the French are convinced it is the intention of the Anglo-American interests to delay indefinitely working of the Mosul field, in line with the Anglo-American ideas of curtailment of world production.

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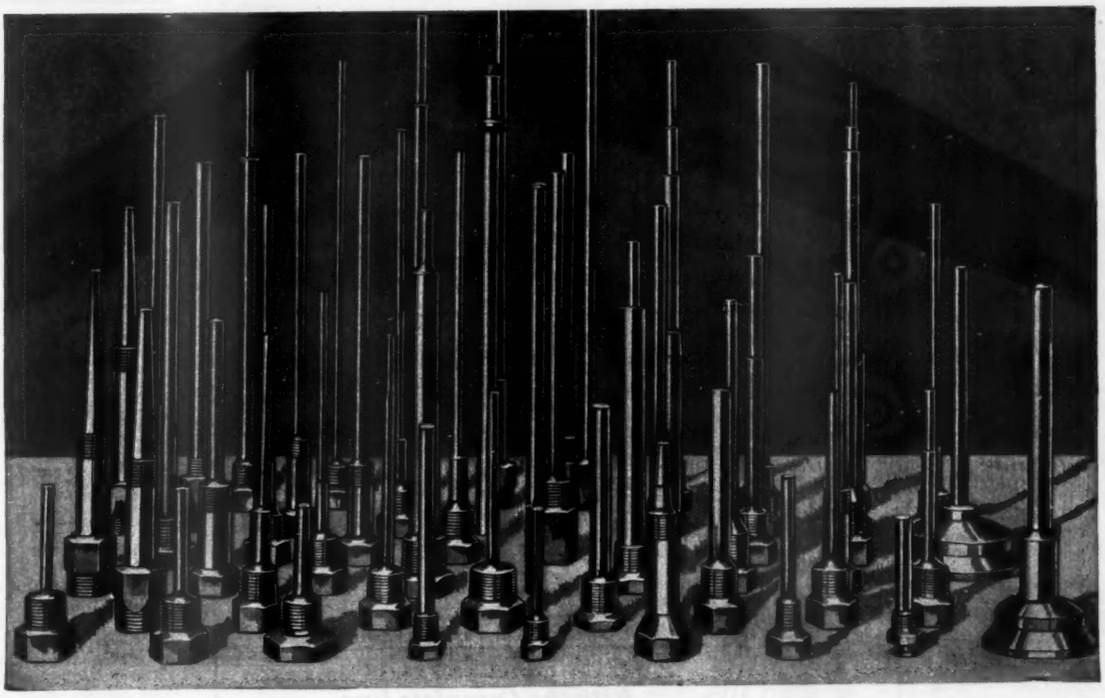

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Of Interest to Sales Departments

Motor Fuel Demand First Five Months Shows 12.7% Gain

Gasoline consumption in 36 states for the month of May, 1929, as indicated by reports made by wholesalers and dealers in the various states under provisions of the gasoline tax laws or gasoline inspection laws, totaled 764,010,000 gallons, compared with 678,103,000 gallons in May, 1928, an increase of 85,907,000 gallons, or 12.7 per cent. Daily average consumption for May, 1929, was 24,645,000 gallons, compared with a daily average of 22,788,000 gallons in April, 1929, an increase in daily average of 8.2 per cent during May.

Gasoline consumption in these 36 states for the five months ending with May, 1929, amounted to 3,073,947,000 gallons, compared with 2,745,800,000 gallons for the corresponding period of 1928, an increase of 328,147,000 gallons, or 12.7 per cent.

Consumption during April and May for the state of Massachusetts is also shown.

The figures giving the quantity of gasoline sold or offered for sale, as reported under various laws, follow. In some cases they are gross figures before deductions allowed for small quantities of gasoline reshipped or sold for other than taxable use, the tax upon which if paid, is subsequently refunded. All figures which are subject to revision were corrected by the American Petroleum Institute.

Gasoline Consumption by States, May, 1929

	May, 1929 Gallons	May, 1928 Gallons
Alabama	16,150,000	13,842,000
Arizona	5,061,000	4,080,000
Arkansas	11,332,000	9,932,000
Delaware	2,898,000	2,658,000
District of Columbia	6,493,000	5,644,000
Florida	18,554,000	19,197,000
Georgia	18,884,000	17,133,000
Idaho	4,982,000	4,765,000
Indiana	39,280,000	35,690,000
Iowa	31,644,000	29,023,000
Kansas	31,118,000	25,601,000
Kentucky	13,965,000	11,947,000
Louisiana	14,552,000	13,990,000
Maine	8,851,000	7,530,000
Michigan	70,094,000	59,851,000
Minnesota	34,960,000	32,435,000
Nebraska	18,841,000	16,542,000
Nevada	1,315,000	1,236,000
New Hampshire	5,188,000	4,199,000
New Jersey	43,759,000	39,087,000
New Mexico	3,766,000	3,091,000
North Carolina	22,663,000	19,587,000
North Dakota	15,850,000	12,040,000
Ohio	86,035,000	80,998,000
Oklahoma	25,894,000	22,016,000
Oregon	13,867,000	13,010,000
Rhode Island	7,603,000	5,753,000
South Carolina	10,005,000	8,653,000
South Dakota	12,787,000	10,768,000
Tennessee	17,002,000	14,724,000
Texas	62,709,000	54,985,000
Utah	5,552,000	4,665,000
Virginia	18,322,000	16,094,000
Washington	22,588,000	20,688,000
Wisconsin	38,163,000	33,426,000
Wyoming	3,293,000	3,223,000
Total	764,010,000	678,103,000
Daily average	24,645,000	21,874,000
Increase over previous year:		
Amount of Increase	85,907,000	
Percentage Increase in Daily Average	12.7	

NEW GULF TERMINAL

HOUSTON, Tex., July 27.—The Gulf Refining Co. has started construction of a new bulk plant and oil terminal on the Houston Ship Channel on the site formerly occupied by the Keen & Wolf refinery purchased last year by the Gulf Refining Co. The new construction will include terminal facilities for two boats, a warehouse and additional storage.

The plant will enable the Gulf Refining Co. to unload gasoline and oil for distribution in this territory direct into the bulk storage instead of having to transport it to the bulk plant, at present on the opposite side of the city, and then reload it in tank wagons.

START OPENING FIRESTONE CHAIN OF ONE STOP SERVICE STATIONS

Reports from several sections of the country show that a number of the Firestone Tire Stores which include gasoline, lubricating oil and grease service with the sale of tires and other products, are now in operation with others to start before the end of the summer.

The opening of the stations follows the announcement of a plan for a nationwide string of superservice stations by Firestone officials early in the year. The plan was explained in the April 4, 1929, issue (page 47) of The Oil and Gas Journal in connection with a visit of Harvey S. Firestone to Tulsa.

The Firestone Tire & Rubber Co. at the beginning of the year set aside a fund of $30,000,000 to help finance dealers in the construction of large stations which would give the car owner every service with the exception of repair. The fund is handled by a subsidiary organization known as the Firestone Stores, Inc. Eventually the company expects to have one or more of these stations in all cities having a population in excess of 10,000. The stations are financed so that 51 per cent of the stock is owned by the Firestone company. Although this gives the company control of the stations the actual management is in the hands of the dealers.

Tire repair, brake service, battery service, gasoline and lubricating oil and greasing. The company in its advertising is stressing the fact that all these services are obtainable in a "One Stop Service Station." The plan calls for a supervision of all services so that the car owner will obtain any of the services requested.

At the Muskogee station, the company sells the branded gasoline and lubricating oils of the Shaffer Oil & Refining Co. The latter company operates a refinery at Cushing, Okla. Although no announcement has been made, it is understood that the Firestone company eventually expects to sell gasoline and lubricating oil under its own trademarks. The batteries which the company is now manufacturing bear the Firestone name.

One of the large Firestone Tire Stores was recently opened at Tampa, Fla. The company reported the sale of 26,000 gallons of gasoline on the opening day. The company has eight stores completed or under construction in the smaller cities of Oklahoma.

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Tire Repairs
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IF YOU give your automobile the protection it deserves as an investment, you need all of the services outlined on this page, but do you have time to drive to various parts of town to have your car properly taken care of?
¶Wouldn't it be a wonderful convenience and saving to have it all done under one roof? That's what our One-Stop Service will do for you.
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BATTERIES - BRAKE SERVICE - GAS - OIL - GREASE
Firestone Tire Store
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MULLIN CHICAGO MANAGER

CHICAGO, July 27.—R. N. Mullin has been appointed manager of the Chicago division of the Continental Oil Co. This appointment follows the recent merger of the Continental Oil Co. and the Marland Refining Co. The offices now occupied by the Continental company formerly were the headquarters of the Marland company. P. J. Ryan has been appointed assistant manager of the Chicago office.

WHO'S WHO
In Petroleum Refining and Marketing

By C. O. Willson

Fourteenth of a series of articles describing briefly the operations of the major refining and marketing organizations in the United States.

Union Oil Co. of California

The Union Oil Co. of California is one of the half dozen major refining and marketing organizations operating on the West Coast. In addition it is one of the largest independent export organizations in the United States.

The company operates more refineries than any other company in California. These refineries and their daily crude oil capacities are as follows:

Refineries

Location*—	Daily Crude oil capacity Bbls.
Oleum	27,500
Brea	6,000
Los Angeles	55,000
Santa Paula	900
Maltha	5,000
Avila	10,000
Total	104,400

*All plants located in California.

These refineries operate with various grades of California crude oil and considered as one organization refine practically all the products obtainable from western crudes. The Oleum refinery manufactures lubricants in addition to the usual skimming plant products. The only refinery with cracking facilities is the Los Angeles plant with a cracking capacity of 15,000 bbls. daily.

Marketing

The company-owned distributing facilities in the United States at present are confined to the West Coast States. The company has a large number of stations in California, Oregon and Washington. Some of the most attractive and elaborately equipped service stations in California have been built by the Union company.

Instead of finding new domestic markets for its refineries whose output far exceeds the West Coast distribution the Union company has pursued a policy of expanding its export outlets. The company either directly or through subsidiary companies is a large marketer in western Canada and Alaska. Its products also are found in many of the Pacific islands. For several years the company has had a large export business in the Orient and Australia. Part of this export business is carried on by the Union Atlantic Co. which is owned by the Atlantic Refining Co. and the Union Oil Co. on a 50-50 basis.

While some of the Union refinery output has been sold to East Coast customers the company as yet it is not a direct factor in eastern markets. Direct outlets could readily be established if considered advisable by the management. The company has production holdings in several areas of the Mid-Continent.

MOVES SALES OFFICE

CHICAGO, July 27.—The local sales office of the Amarillo Producing & Refining Co., has been moved from 624 South Michigan Avenue, to 360 North Michigan Avenue, Room 1206. This is the suite of the Northland Oil Co., C. L. Maguire, president. There is a connection between the two organizations through mutual ownership in the Michigan Central Refining Co., at Muskegon. The output of this refinery is to be sold by the Northland Oil Co.

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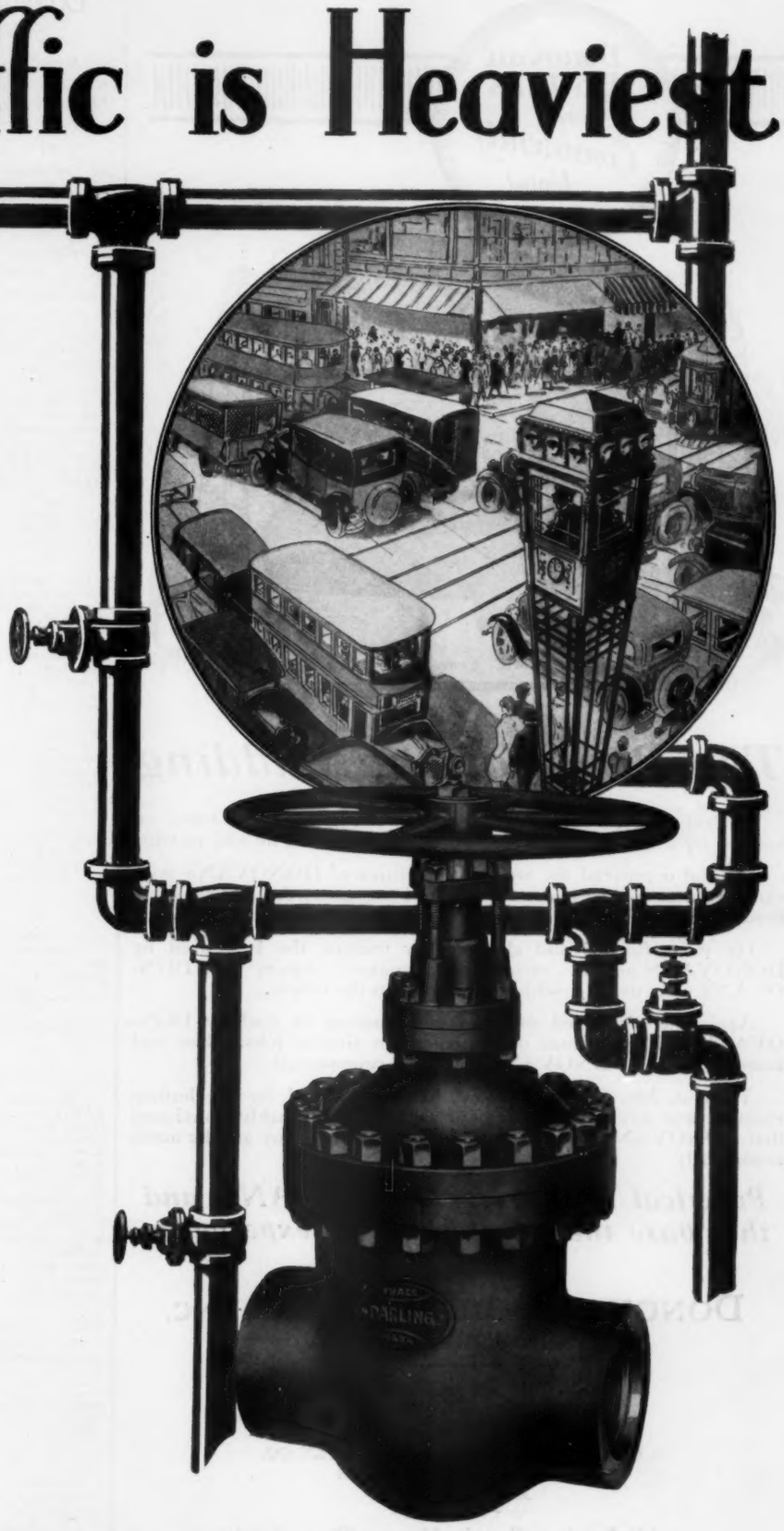

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True enough, an ordinary valve might serve the purpose. But why risk it? Doesn't it pay to invest a little more in valves and secure safety insurance?

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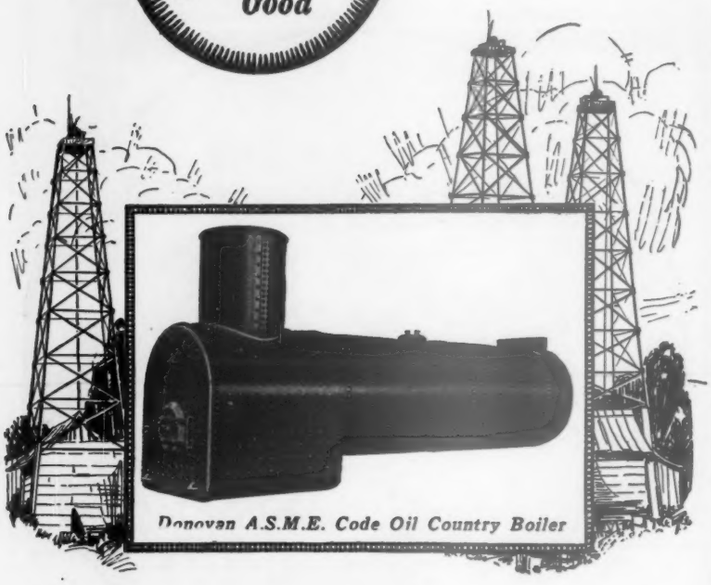

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The Proof of the Pudding

A drilling contractor who had made a few comparisons on boilers, selected DONOVANS and at the same time he told us why.

He had compared the steaming qualities of DONOVANS with various other makes and said that in every case, the DONOVAN fired easier and held its pressure better.

He went further and checked, by meters, the fuel used by DONOVANS and by various other makes. Again, the DONOVANS won, using considerably less than the others.

Again, he compared the fuel consumption of coal by DONOVANS and by various other makes on similar jobs. The fuel economy of the DONOVANS was very pronounced.

Thruout, Mr. Contractor said, he had allowed for the human element and every other element and was thoroughly convinced that DONOVANS were the best boilers he could buy and he acted accordingly.

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CALIFORNIA OIL FIELD OPERATIONS FOR JUNE, 1929

According to figures collected by the American Petroleum Institute, Pacific Coast office, the total production of crude oil in California for June amounted to 24,624,627 bbls., an average of 820,821 bbls. per day. This is an increase of 44,906 bbls. per day over May production.

Total stocks of crude and all products in Pacific Coast territory increased during the month 5,475,590 bbls. The total stocks at the end of the month were 165,270,399 bbls. The total stock increase for 1929, up to June 30, was 25,269,505 bbls. Comparative figures as of June 30, 1929, May 31, 1929, and June 30, 1928, are shown in detail.

Sixty-two wells were completed during the month with an initial daily production of 123,001 bbls., compared with 67 wells completed during May with an initial production of 84,259 bbls.

PRODUCTION

(Figures of production and stocks are in barrels of 42 gallons)

District—	Bbls. per month	Daily average June, 1929	Daily average May, 1929	Daily average June, 1928
Kern River	435,293	14,510	13,948	6,651
Mount Poso	145,124	4,837	3,326	136
Fruitvale	49,724	1,657	980	.....
Round Mountain	1,346	45	100	442
McKittrick	129,571	4,319	4,242	4,902
Midway-Sunset	1,938,040	64,601	65,740	70,846
Elk Hills	455,237	15,175	17,302	23,563
Lost Hills-Belridge	132,271	4,409	4,388	4,140
Coalinga	279,607	9,320	9,322	10,630
Kettleman Hills	99,154	3,305	3,373	.....
Wheeler Ridge	18,833	628	660	930
Watsonville	1,875	63	62	59
Santa Maria	119,208	3,974	4,302	5,417
Summerland	3,690	123	121	123
Elwood-Goleta	792,865	26,429	28,282	84
Santa Barbara	.....	.....	49	.....
Rincon	103,578	3,419	3,564	4,061
Ventura Avenue	1,778,117	59,271	60,692	48,646
Ventura-Newhall	146,271	4,876	4,817	5,619
Los Angeles-Salt Lake	46,833	1,561	1,550	1,550
Whittier	46,037	1,535	1,445	1,723
Fullerton (Brea Olinda)	374,627	12,488	12,547	15,698
Coyote	317,662	10,589	11,205	13,435
Santa Fe Springs	7,123,985	237,466	181,600	37,213
Montebello	285,988	9,533	10,215	12,150
Richfield	457,491	15,250	15,784	19,112
Huntington Beach	1,263,130	42,104	43,331	53,414
Long Beach	5,070,550	169,018	175,189	194,356
Torrance	384,029	12,801	13,621	17,567
Domingues	291,341	9,711	10,069	12,211
Rosecrans	180,961	6,032	5,808	6,569
Inglewood	678,333	22,611	23,681	30,202
Newport	1,200	40	37	29
Seal Beach	1,399,545	46,651	42,428	36,834
Potrero	22,233	741	549	496
Lawndale	51,878	1,729	1,586	.....
Total	24,624,627	820,821	775,915	638,808
May	24,053,351	775,915	.....	.....
Increase	571,276	44,906	.....	.....

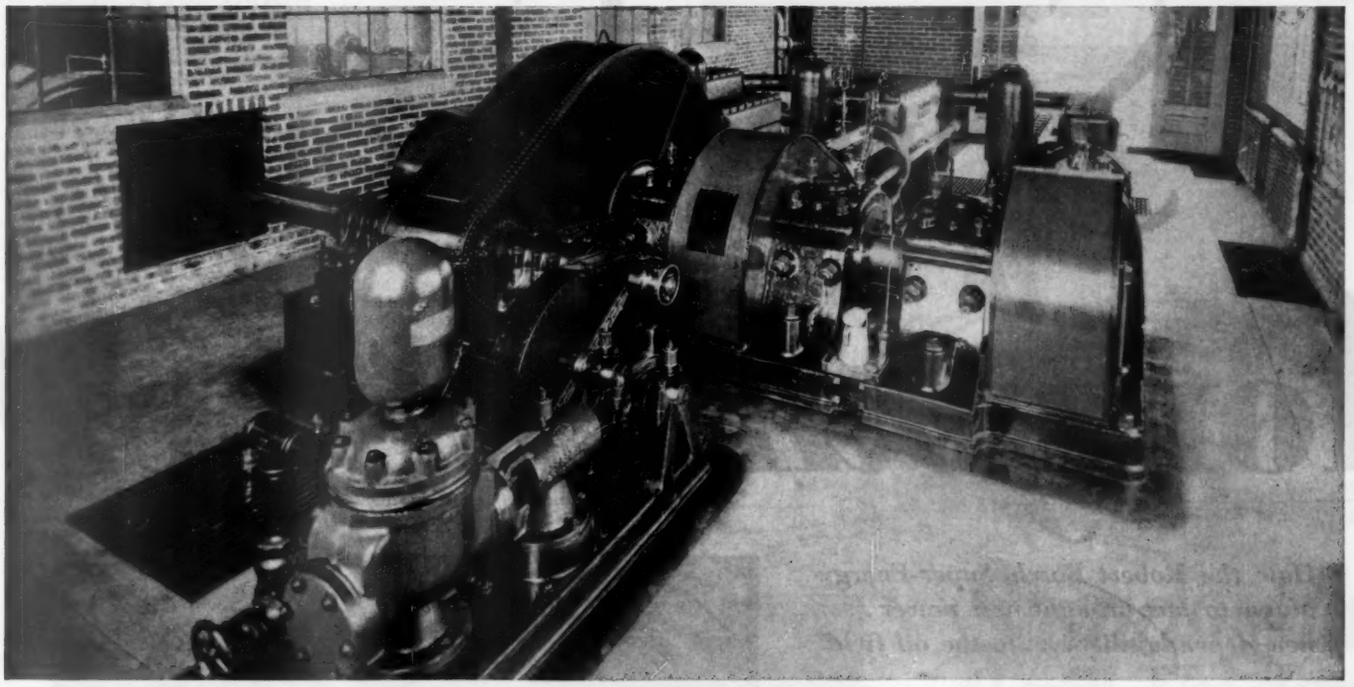
STOCKS

	June 30, 1929	May 31, 1929	June stock increases	June 30, 1928
Heavy crude, heavier than 20° A.P.I., including all grades of fuel	104,428,124	102,921,746	1,506,378	95,284,117
Refinable crude, 20° A.P.I., and lighter	33,294,635	30,455,516	2,839,119	19,955,030
Gasoline	14,265,792	14,108,752	157,040	14,000,661
Naphtha distillates	2,901,460	2,233,956	667,504	1,595,566
All other stocks	10,380,388	10,074,839	305,549	9,643,973
Total all stocks	165,270,399	159,794,809	5,475,590	140,479,347

DEVELOPMENT

District—	New rigs up	Active drilling	Completed	Daily initial output	Active producing	Abd. wells Drillers	Abd. wells Producers
Kern River	6	7	2	400	1,071	3	..
Mount Poso	7	5	5	935	19	2	..
Fruitvale	1	3	2	1,260	3	..	..
Round Mountain	2	5	1	410	1	..	..
McKittrick	..	1	..	....	277	..	..
Midway-Sunset	5	25	7	2,279	2,093	..	2
Elk Hills	..	1	..	....	195	..	..
Lost Hills-Belridge	1	3	1	25	306	..	..
Coalinga	..	..	..	....	737	..	..
Kettleman Hills	6	30	..	....	1	..	..
Wheeler Ridge	..	..	..	....	32	..	..
Watsonville	..	..	..	....	6	..	..
Santa Maria	..	4	..	....	223	..	..
Summerland	1	2	..	....	89	1	..
Elwood-Goleta	1	4	1	4,050	12	..	..
Santa Barbara	35	22	..	....	....	..	..
Rincon	1	3	..	....	29	..	..
Ventura Avenue	6	40	3	1,340	168	..	..
Ventura-Newhall	6	29	..	....	497	..	..
Los Angeles-Salt Lake	..	..	..	....	310	..	..
Whittier	..	..	..	....	160	..	..
Fullerton	1	3	..	....	371	..	..
Coyote	1	2	1	210	207	1	..
Santa Fe Springs	15	152	22	103,281	419	..	1
Montebello	1	3	..	....	170	..	..
Richfield	4	10	..	....	272	..	3
Huntington Beach	3	6	3	300	558	4	1
Long Beach	10	91	11	6,096	942	1	2
Torrance	..	..	..	....	593	..	..
Domingues	..	1	..	....	63	..	..
Rosecrans	1	3	3	1,700	97	2	1
Inglewood	1	..	..	....	223	..	..
Newport	..	1	..	....	2	..	..
Seal Beach	4	6	2	1,665	149	1	..
Potrero	..	6	..	....	4	..	..
Lawndale	..	7	..	....	6	12	..
Miscellaneous drilling	15	139	..	....	....	8	..
June	134	617	62	123,001	10,305	35	10
May	80	605	67	84,259	10,347	13	13
Increase	54	12	*5	38,742	*42	22	*3
Average for year 1928	107	520	59	56,802	10,823	15	25
Average for year 1927	97	404	75	39,992	11,276	23	21
Average for year 1926	95	422	76	32,635	11,288	24	17
Average for year 1925	105	417	79	42,247	11,393	28	12
Average for year 1924	103	510	103	42,412	10,903	28	21

*Decrease.



A 25,000-barrel Prescott Pipe Line Pump at the Ralston, Oklahoma, station of the Oklahoma Pipe Line Company.

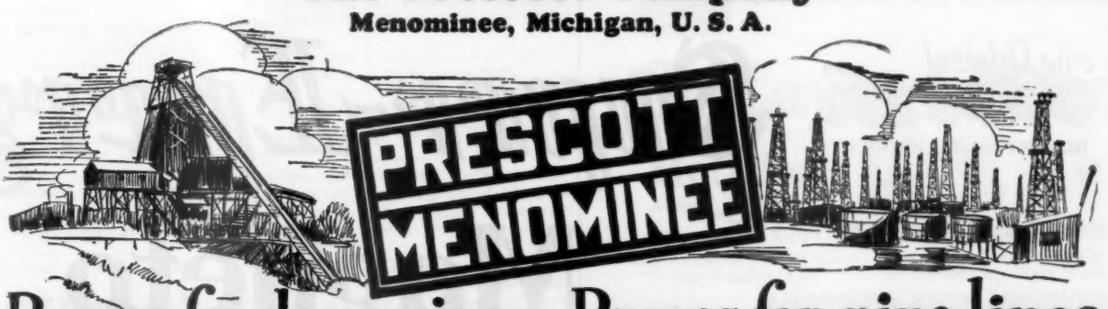
MINIMUM POWER NEEDED When Prescott Pumps are Used

PRESCOTT pumps operate with an unusual minimum of power. They keep the oil moving day-in and day-out without interruptions for repairs or adjustments. These powerful, dependable pipe line pumps are built to take high pressures, to carry heavy overloads, to stand up to the hardest kind of continuous service. They do it economically.

The repeated preference of leaders in the industry for Prescott Pipe Line Pumps is recognition of Prescott performance.

A bulletin on request.

The Prescott Company
Menominee, Michigan, U. S. A.



Pumps for deep mines ~ Pumps for pipe lines

OGJ 8-1 Gray

Super Energy for *your* engines!

How the Robert Bosch Super-Energy Magneto has brought new power .... new dependability .... to the oil field.

IN a large midwestern oil company operating three plants at Seminole, Oklahoma, forty pumping engines are installed. And every engine is equipped with a Robert Bosch Super-Energy Magneto.

This company is only one of many leading operators in the oil fields who are adopting this magneto. For it is made by Robert Bosch, pioneer magneto manufacturer. It gives you advantages found in no other magneto.

Every detail of construction in this Super-Energy Magneto helps to improve the performance of your engines, to eliminate breakdowns, to minimize maintenance costs.

Thus the super-energy built into this magneto provides extra power, a reserve power. Dustproof design avoids breakdowns. Freedom from lubrication worries eliminates one of the most common causes of magneto troubles.

There is a Super-Energy Magneto for every type of engine . . . for the giant gas engine of 1000 B. H. P. . . . for the smaller, higher speed stationary engines of 15 B. H. P. . . . for other smaller engines down to the smallest single cylinder engine . . . and of course for trucks, tractors, stationary and marine engines of all descriptions. Write for a copy of "Ignition Briefly Described" containing information of importance to every engine operator.

Only Robert Bosch Super-Energy Magnetos are Original-Bosch Magnetos. For your protection look for the full name "Robert Bosch" and trademark shown at right.

Upper photo shows section of large mid-western oil plant in which Super-Energy Magnetos and Pyro-Action Spark Plugs are used. Lower photo; close-up of Super-Energy Magneto in service.

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The Original Bosch
ROBERT BOSCH PRODUCTS

Super-Energy Magneto

CO-OPERATIVE RESEARCH RESULTS ARE SHOWN

(Continued from Page 46)

celeration and general behavior of the engine. The relationship between the form of the distillation curve and performance of the engine when cold are not so readily summarized as are the items already mentioned. In general, nearly the maximum acceleration of which any engine is capable can be obtained with almost any fuel, but a much richer mixture is required if the fuel is less volatile. Practically, therefore, it is more difficult to secure quick pick-up, which means maximum engine acceleration, with the heavier or less volatile fuel simply because it is more difficult to control the mixture ratio.

Another portion of this project was undertaken to determine whether the intermediate range of volatility, as represented by the 50-per cent distillation point, has a significant influence on engine acceleration. A study of this point has shown that, while there is some influence of this sort, the effects noted are somewhat erratic and seem to depend upon accidental rather than essential features of design and operation. In view of this result, a program is now under way for the analysis of the performance of a number of typical engine designs. For this purpose some of the staff of the Bureau will make observations with the Bureau of Standards equipment in the laboratories of several of the automobile factories. The details of this program are described in the paper by Donald Brooks on Design-Factor Engine-Acceleration Tests.

Knock Characteristics

The latest of the co-operative-fuel-research projects and the one now occupying most of the time of the Bureau staff is that of deciding upon satisfactory apparatus and technique for the measurement of the knock characteristics of fuel. This project is now in active progress. Final results are not to be expected for some months. The special test engine exhibited at the annual meeting of the society in January, 1929, is now being set up in the various laboratories represented on the detonation subcommittee and a program of preliminary tests, designed to reveal any faults in the engine and to indicate the most promising lines for further work, has been agreed upon. On the basis of this work the steering committee probably will invite a larger group of laboratories to join in co-operative tests, with the object of arriving at a tentative standard method of knock-testing.

In conclusion, I desire to emphasize that the fuel-research project, on which the two industries have spent about $4,500 per year each, has brought the engineering staffs of the two industries into accord; has contributed largely to fuel saving for the country; has afforded all the technical data needed to combat crankcase dilution, which data has been well utilized; has afforded complete data on the relationship of fuels to engine starting, which have not yet been fully utilized; has cleared up the question of the effect of fuel on engine acceleration; and is now concerned with securing a satisfactory technical control over the relationship between fuels and engine compression-ratios.

APPENDIX

Co-operative Fuel Research Publications

All the co-operative-fuel-research progress reports which have been presented at previous meetings of the society or the American Petroleum Institute are listed below, together with certain papers on the same or related subjects which have been presented at meetings of the American Chemical Society.

Journal of the Society of Automotive Engineers

Economic Motor-Fuel Volatility; February, 1923, page 137.

Economic Motor-Fuel Volatility; July, 1923, page 3.

Economic Motor-Fuel Volatility; March 1924, page 267.

Factors Affecting the Rate of Crankcase Oil Dilution; July, 1924, page 69.

Transition Method for Measuring Crankcase Oil Dilution; October, 1924, page 334.

Recent Co-operative Fuel Research Progress; February, 1925, page 237.

Measuring the Percentage of Crankcase Oil Dilution; March, 1925, page 355.

Engine-Starting Tests, July, 1925, page 52.

Progress Report on Engine-Starting Tests; February, 1926, page 147.

Co-operative Fuel Research (general summary); April, 1926, page 349.

Progress in Measurement of Motor-Fuel Volatility; April, 1926, page 393.

Additional Engine-Starting Tests; July, 1926, page 3.

Volatility Tests for Automobile Fuels; August, 1926, page 151.

Fuel Research Summarized; February, 1927, page 193.

Fuel Requirements for Engine Starting; March, 1927, page 353.

Methods of Measuring the Antiknock Value of Fuels; May, 1927, page 599.

Starting Ability of Fuels Compared (lean explosive limits for cracked and straightrun gasolines and other motor fuels); July, 1927, page 15.

Engine-Acceleration Tests; August, 1927, page 184.

Volatility Data from Gasoline Distillation Curves; April, 1928, page 437.

Results of Two Recent Detonation Surveys; April, 1928, page 448.

Influence of Fuel Characteristics on Engine Acceleration; September, 1928, page 235.

Dewpoint Data on Gasoline; November, 1928, page 478.

Vapor-Pressure Data on Motor Gasolines; May, 1929, page 488.

Economic Fuel Volatility and Engine Acceleration; July, 1929, page 669.

Operating Factors in Engine Acceleration; to be printed in S.A.E. Transactions, January-June, 1929.

Bulletin of the American Petroleum Institute

Results Obtained From Joint Research Tests; December 30, 1922, page 95.

Economic Motor Fuel Volatility; December 31, 1923, page 121.

Economic Motor Fuel Volatility; December 31, 1924, page 115.

Measurement of Crankcase Dilution, December 31, 1924, page 122.

Effects of Fuel and Engine Design on Starting; April 12, 1926, page 121.

The Co-operative Fuel Research at U. S. Bureau of Standards—1922-1925; January 31, 1927, page 141.

Fuel Characteristics and Engine Starting; January 31, 1927, page 143.

An interpretation of the A.S.T.M. Distillation Curves of Motor Fuels; January 31, 1928, page 54.

The Lean Explosive Limits of Cracked and Straightrun Gasolines; January 31, 1928, page 69.

Some Factors in Engine Acceleration; January 31, 1928; page 74.

A Detonation Survey; January 31, 1928, page 81.

Equilibrium Volatility of Motor Fuels; January 3, 1929; Section II, page 124.

Relation of Fuel to Engine Acceleration; January 3, 1929, Section 11, page 143.

Industrial and Engineering Chemistry.

Fuel Requirements of Internal-Combustion Engines; May, 1923, page 476.

Lubrication Data From Co-operative Fuel Research; May, 1926, page 482.

Dewpoints of Air-Gasoline Mixtures From Distillation Curves; August, 1928, page 821.

Auto-Ignition Temperatures of Liquid Fuels; November, 1928, page 1219.

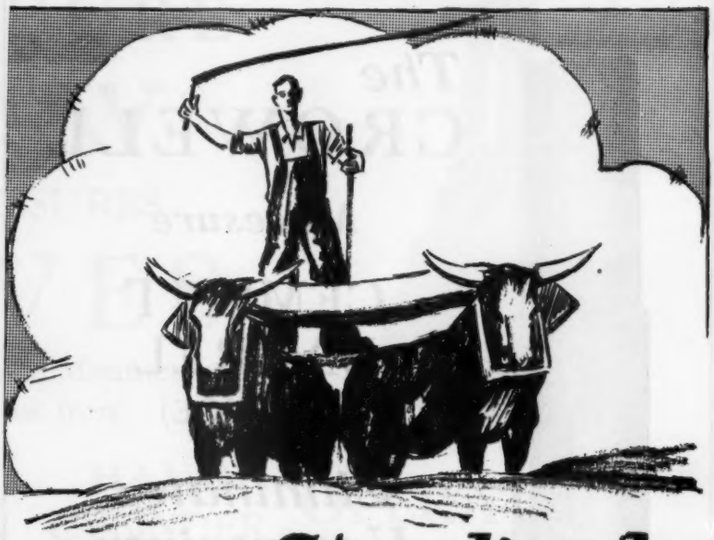
Vapor Pressure of Hydrocarbons; not yet published.

DIGESTS OF STATE LAWS

The Western Petroleum Refiners Association has completed digests of the gasoline tax laws and the state inspection laws. The two digests are issued in separate booklets.

The digests give all the essential data covering the laws of the 48 states relating to the gasoline tax laws and state inspection laws. Several of the states have changed certain provisions of their laws in the past few months.

MILLED LAYNE GROOVE



Standing the Gaff Under All Conditions

Oxen's amazing strength and endurence reflect the durability of *Layne Milled Groove* screens — they both know no load too heavy, no failing stamina, no superior.

When installing *Milled Groove* you not only are assured maximum dependability but also an increase in daily production — month in and month out — from *33-1/3% to 100%*.

Obviously, you will immediately change to *Milled Groove* if you are certain to get so many more barrels of oil per day, yet without additional help, without more up-keep expenditure *(Layne Milled Groove* actually lowers operating costs).

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LEADERSHIP IN SCREEN MANUFACTURE FOR MORE THAN A QUARTER CENTURY

The
CROWELL
Makesure
CEMENT
BARREL
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Eliminates Uncertainty
IN
DRILLING
OPERATIONS

The nature of cement—its hardening or setting ability—makes it imperative that the hole be in perfect condition, and that there be no obstacles in its application. The Crowell Cement Shoe meets these demands by providing positive control of both cementing and circulation and thus eliminates doubt as to when the casing is suspended or resting on the bottom.

A user closes his letter with the following comment:

"We are now setting the Crowell Makesure Cement Shoe on all final strings of casing and have eliminated all troubles resulting from frozen casing."

You are sure when you use the Crowell Makesure Cement Barrel (or shoe).

THE LORRAINE CORP.
MANUFACTURERS AND DISTRIBUTORS
OIL WELL SPECIALTIES
115th and Alameda Streets
Los Angeles, Calif.

TIDE WATER STARTS SALE OF TYDOL ETHYL GASOLINE

NEW YORK, July 27.—Tide Water Oil Sales Corp., which late in 1928 launched an innovation in gasoline marketing by introducing a colored high-test motor fuel which was sold at the regular price for U. S. Motor gasoline this week started marketing "Tydol Ethyl" for which it claims a zero knock rating.

Announcing its new gasoline, the company says: "You can thank the amazing success of Hi-Test Tydol for Tide Water's latest gasoline achievement—the new Tydol Ethyl with a zero knock rating.

"Tide Water engineers have succeeded in combining the proven qualities of Hi-Test Tydol with Ethyl, the undisputed leader of antiknock compounds, resulting in another and still greater superfuel.

"Why pay a 3-cent premium for motor fuels that show a knock rating of 5, 8 and 9? The Midgley (bouncing pin) indicator, the official gauge for measuring antiknock quality, shows that the new Tydol Ethyl has an unvarying and a positive knock rating of zero.

In a table on the knock rating of six prominent premium gasolines, the Tide Water Oil Co. says: These 3-cent premium gasolines were tested on the Midgley indicator according to an established standard scale over a period of six months from November, 1928, to May, 1929, with the following results:

	Minimum knock rating	Maximum knock rating	Average knock rating
Fuel A	6	10	9
Fuel B	5	13	8
Fuel C	0	5	2 1/5
Fuel D	3	7	6½
Fuel E	3	5	4½
Tydol Ethyl	0	0	0

ERECT BULK STATIONS

NEW YORK, July 27.—Tonawanda, N. Y., just beyond the Buffalo City line, will be the location of the two new bulk oil terminals, one to be erected by the Sun Oil Co. and the second by the Brule & Bennett Fuel Oil Co. Sun Oil Co. will expend $350,000 in building storage for 500,000 gallons of gasoline and 200,000 gallons of miscellaneous oils, with a warehouse and garage.

The Brule & Bennett Fuel Oil Co. will spend $100,000 in building a bulk terminal, with considerable fuel oil storage. Both plants will be located on the Niagara River, permitting deliveries and shipments by barge from the Great Lakes or the New York State barge canal.

SHELL OPENS STATIONS

NEW YORK, July 27.—Shell Eastern Petroleum Products, Inc., was host here to a group of 150 garage and service station owners in New York City at a dinner in the Commodore Hotel. The occasion was the celebration of the entrance of the Shell into this territory.

Speakers of the evening included W. J. Filer, vice president in charge of sales; T. S. Marshall, advertising manager; T. Crowe, assistant corporation counsel of New York City, representing Mayor Walker, and Norwood Weaver, vice president of Calkins & Holden, advertising agency.

Other guests included H. W. Boynton, district manager for Shell: L. S. Schulte, district manager; W. L. Bay, Jr., New York district manager; W. E. Overton, bulk sales manager, and H. S. Royal.

LEASE LARGE STATION

CHICAGO, July 29.—The Sinclair Refining Co. has leased the site occupied by the historic "Midway Gardens" for a super service station and greasing palace. The site is located at the corner of Cottage Grove Avenue, and the Midway, and has been leased for a term of 82 years from May 29 of this year. The rental for the first two years is at the rate of $12,000 a year and increases at the rate of $1,000 a year for each period of from three to five years until the final rental to be paid for the greater length of the lease is $17,000 a year. Immediate possession has been given. The site is 300 by 150 feet and the rental value indicates that it is worth in the neighborhood of $350,000.

VENEZUELA PRODUCTION UP 50 PER CENT IN YEAR

NEW YORK, July 27.—Continued growth in crude oil production in Venezuela is shown by June production figures which show a gain of close to 50 per cent over June of last year. Production for the month, according to "South American Oil Reports," was 12,100,959 bbls., compared with 12,038,164 bbls. in the previous month and 8,339,075 bbls. in June last year. Venezuelan Oil Concessions, Ltd., held its lead, with production of 3 839 935 bbls., with Lago ranking second with 3,203,294 bbls.

Production by companies,, bbls. of 42 gallons:

	June, 1929	June, 1928
V. O. C.	3,839,835	2,967,815
Lago	3,203,294	2,240,066
Gulf	2,637,100	836,700
Caribbean Pet.	1,598,400	1,134,270
Creole Pet.	625,900	973,000
B. C. O. Ltd.	168,930	153,224
Gen. Asphalt	27,500	34,000
Total	12,100,959	8,339,075

Shipments of oil from Venezuela in June were 10,564,396 bbls., at the daily rate of 352,147 bbls., compared with 10,275,165 bbls. or 331,457 bbls. daily in May. In June last year the shipments totaled 8,230,514 bbls. or 274,350 daily.

RIVER WATER DRIVE IN CLARION PRODUCER

OIL CITY, Pa., July 27.—A possible reason for the unusual production of a 100-bbl. well in the Helen Furnace district, Clarion County, along the Clarion river, is thought to have been discovered. The well, which was drilled in "Nigger" sand at a depth of 398 feet, is holding out and producing 5 bbls. an hour.

It has developed that over 50 years ago a well was drilled within a few hundred feet of No. 1 location, and oil produced in considerable quantities which was loaded at the boat scaffold and shipped to Pittsburgh by flat boat.

The hole of this well is now in the Clarion river bed, the course of the stream having changed. It is entirely possible that the old well was never correctly plugged and that fresh water from the river is making a natural "water drive," which would cause No. 1 to produce such an unusual amount of oil. The oil from the big well is very lively, and as it flows into the tank a haze of gas can be seen hovering over it.

The No. 2 location is being rapidly pushed to completion.

FURNACE OIL BOOKLETS

The Oil Heating Institute, an affiliated organization of the American Oil Burner Association, has recently published two booklets which will be of interest to all marketers of furnace distillates and fuel oils.

"Oil Heat" deals with the advantages of oil heating in the home, apartment houses and similar buildings. It presents sales arguments for both the manufacturer of oil burner equipment and the sellers of furnace oils.

"Your Guide to Oil Heating Satisfaction" describes the equipment manufactured by members of the institute. The booklet is illustrated with drawings and pictures showing the operation of the equipment.

The headquarters of the institute are located at 342 Madison Ave., New York N. Y.

CHARLES SELF TO TULSA

Charles Self who has been sales manager of the St. Paul division of the Cities Service Oil Co., has been transferred to the Tulsa offices as manager of the Oklahoma division. A new division was recently created by the Cities Service company with headquarters at Kansas City. George S. Speaker was placed in charge of the division.

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VALVES

Iron Body—Bronze Mounted
All Iron—Cast Iron

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"PRESSED STEEL'S" McKees Rocks plant is equipped with the most modern machinery for manufacturing tanks and underframes and also has complete facilities for producing truck frames, bolsters, wheels, springs, forgings, castings, etc., under direction of engineers and shop supervisors who have had many years experience in building tank cars and making car parts, thus saving extra profit that otherwise goes to outside part manufacturers.

When in the market let us have your inquiry. We will be glad to submit proposition on our design or on customer's design of car.

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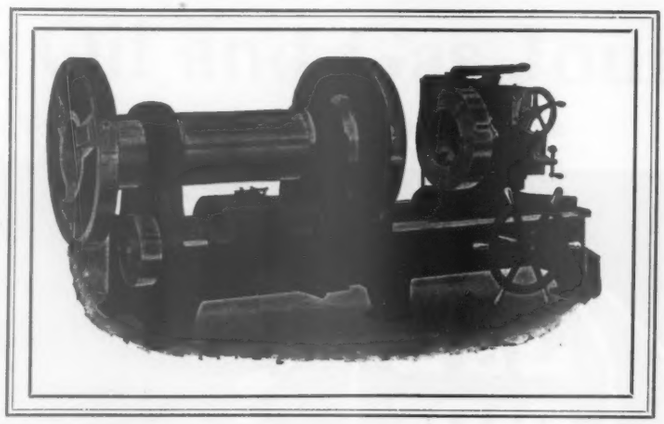

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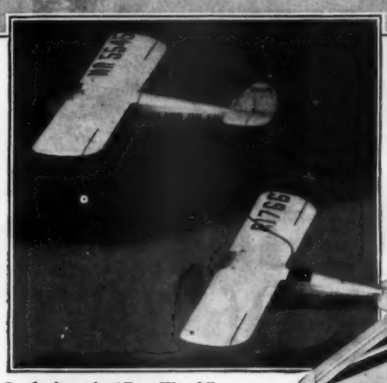

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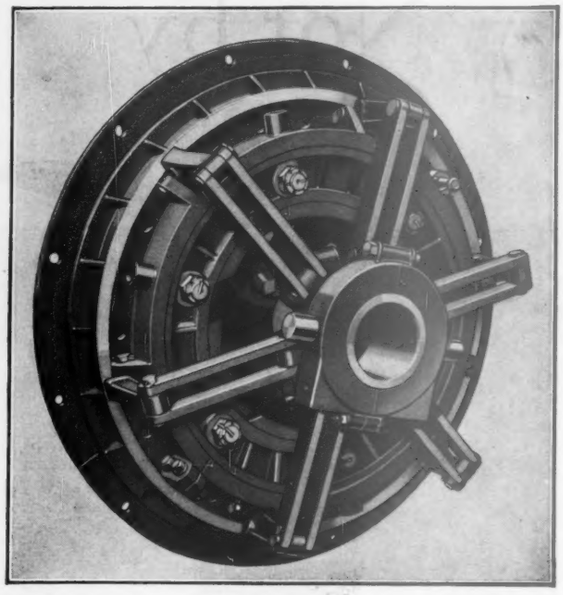

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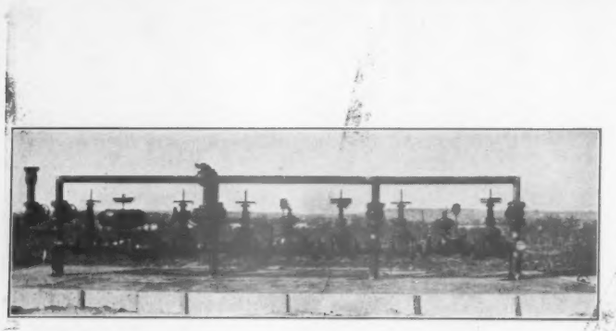

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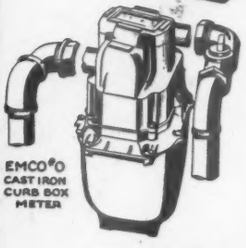

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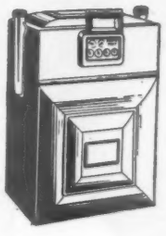

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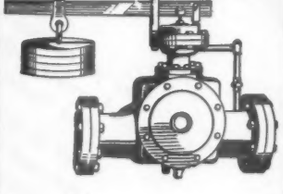

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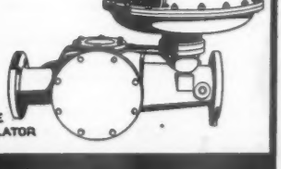

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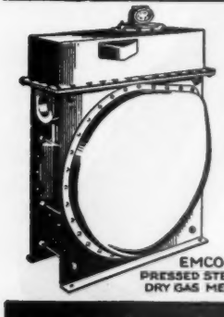

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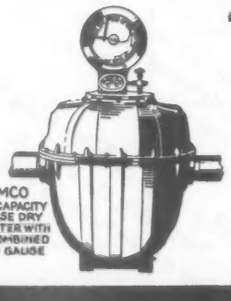

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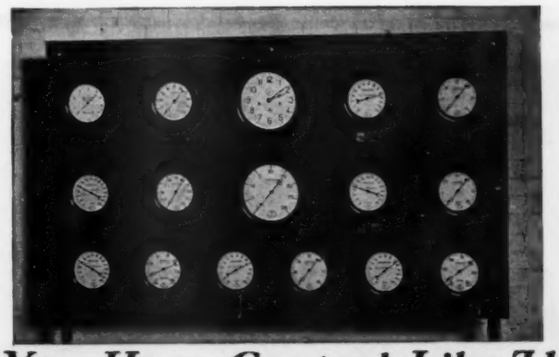

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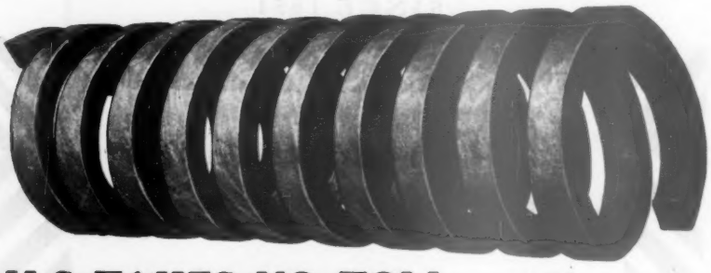

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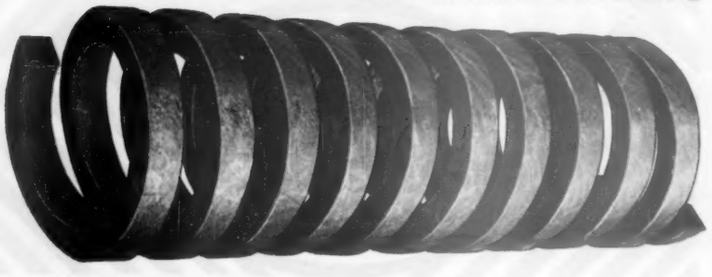

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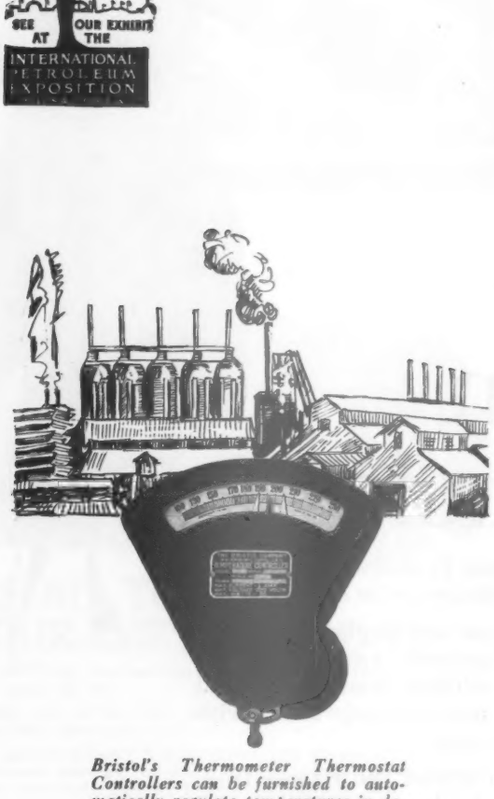

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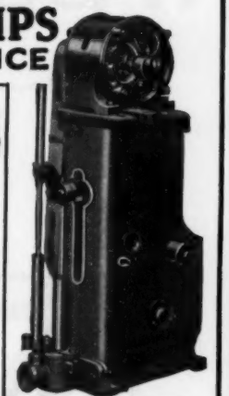

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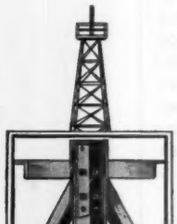

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NEW LOCATIONS IN TEXAS PANHANDLE AND NORTH AND WEST TEXAS FIELDS

Week Ending July 24

TEXAS PANHANDLE

Carson County

Empire Gas & Fuel Co.'s No. 1 M. P. Co. "C," 330 feet north and west of the SE cor. NW, Section 108, Block 4, I.& G.N. Survey. Osborne and others' No. 2 F. E. Percival, 330 feet north and west of the SE cor. E half NE, Section 199, Block 3, I.&G.N. Survey. Baber and Shell Petroleum Co.'s No. 1 Percival, 330 feet south and west of the NE cor. E half SE, Section 199, Block 3, I.&G.N. Survey.

Gray County

Champlin Refining Co. and Danciger's No. 2 Cook-Faulkner, 860 feet north and 330 feet east of the southwest corner of the west 120 acres of the east 200 acres of Section 30, Block B-2, H.&G.N. Survey. Dye & Gillette's No. 2 J. L. Noel, 330 feet north and east of the SW cor. NE, Section 187, Block 3, I.&G.N. Survey. McMan Oil & Gas Co.'s No. 3 J. H. Palmer, 899 feet north and 330 feet west of the southeast corner of the east 100 acres of the west 200 acres of Section 31, Block B-2, H.&G.N. Survey. McMan Oil & Gas Co.'s No. 4 J. H. Palmer, 899 feet south and 330 feet west of the northeast corner of the east 100 acres of the west 200 acres of Section 31, Block B-2, H.&G.N. Survey.

Hutchinson County

Pennowa Oil Co.'s No. 3 Smith and others, 330 feet north and east of the SW cor. NW NE, Section 7, Block Y.

Wheeler County

Osage Development Co.'s No. 1 J. D. Purcell, at the C SE NE, Section 51, Block 17, H.&G.N. Survey.

Moore County

Canadian River Gas Co.'s No. 1 J. M. Shelton, 330 feet north and west of the SE cor., Section 52, Block 3, G.&M. Survey. Phillips Petroleum Co.'s No. 5 J. T. Sneed, Jr. (James), 990 feet north and west of the southeast corner of the east 500 acres of the south 572 acres of the north 892 acres of the M. Robinson Survey.

NORTH CENTRAL AND WEST TEXAS

Archer County

Barnsdall Oil Co.'s No. 7 Wilson-A, 750 feet north and 1,750 feet east of the southwest corner of its 200-acre lease and located in the B. J. Howard Survey, A-179. Stump & Monniger's No. 1 White, 150 feet north and east of the southwest corner of Lot 3, Section 41, A.T.N.C.L. Survey. United Production Co. and Petroleum Production Co.'s No. 2 Wilson-J, 150 feet south and east of the NW cor., Section 7, Wilson's Geraldine Subdivision. Bridwell Oil Co. and Continental Oil Co.'s No. 4 Logan and others, 950 feet north and 150 feet west of the southeast corner of their 72-acre lease out of the John M. Taylor Survey No. 25, A-648. Continental Oil Co.'s No. 8 Richardson-B, 500 feet south and 1,137 feet east of the NW cor., Section 10, Thomas McCoy Survey A-269. Estacado Oil Co. and others' No. 5 H. O. Prideaux, 150 feet north and 450 feet west of the southeast corner of Lot 24, W. J. Fraley Subdivision, John Dorsey Survey A-122. J. H. Freeman's No. 7 A. M. Hennig, 150 feet south and 450 feet west of the northeast corner of the south 60 acres of Section 21, G. P. Meade Subdivision, L. M. Pasture Survey. Humble Oil & Refining Co.'s No. 6 A. M. Kunkel, 150 feet north and 1,350 feet west of the southeast corner of its 40-acre lease out of Section 3, B.B.B.&C. Survey, A-51.

J. B. Peacock's No. 2 Mrs. G. Williams, 150 feet north and 1,150 feet east of the southwest corner of the south 40 acres of the M. L. Swing Survey, A-450. Petroleum Production Co. and others' No. 8 A. M. Kunkel-B, 150 feet south and 1,650 feet west of the northeast corner of their 40-acre lease "B," out of Section 3, B.B.B.&C. Survey A-51. The Texas Company and Burns' No. 1 H. L. and J. F. Ward, 891 feet south and 1,222 feet east of the most westerly northwest corner of the H. L. and J. F. Ward 947.5-acre tract out of the Joseph Tomlinson Survey, A-452. Underwood Drilling Co. and others' No. 4 R. D. Andrews, 50 feet south and 736 feet west of the NE cor. NE SE, Section 1,805, T.E.&L. Survey. W. C. Young's No. 2 W. C. Young, 225 feet north and 750 feet west of the southeast corner of the D.L.&C. Survey, A-961.

Baylor County

W. J. Grisham and others' No. 1 W. H. Portwood, 150 feet north and west of the SE cor. NW, Section 1,281, T.E.&L. Survey.

Borden County

Louisiana Oil Refining Co.'s No. 1 J. S. York, 330 feet south and 1,320 feet east of the NW cor., Section 322, Block 97, H.&T.C. Survey.

Brewster County

E. W. Bateman and others' No. 2 R. L. Nevill estate, 2,000 feet north and east of the SW cor., Section 62, Block 13, G. H.&S.A. Survey.

Brown County

M. T. Anderson's No. 6 A. Leatherwood, 1,600 feet north and 986 feet west of the SE cor., Section 11, J. Delgado Survey, No. 785. G. A. Buder, trustee's, No. 5 Cross, 150 feet south and 450 feet west of the northeast corner of the F. H. Cross 12.3-acre tract out of the James Kinney Survey No. 624. Green Production Co.'s No. 8 A. A. Moore, 200 feet south and 150 feet east of the northwest corner of their lease out of the J. A. Belvin Survey A-1,961. The Texas Company's No. 3 Johnson, 150 feet north and west of the southeast corner of the M. B. Nix Survey A-1,894. T. G. Shaw's No. 1 Jopling, 150 feet northwest of the southeast line and 1,400 feet northeast of the southwest line of the H. C. Collins Survey, A-1,765.

Callahan County

Bradstreet & Holden's No. 5 J. L. Cavanaugh-A, 850 feet south and 200 feet east of the NW cor. N half E half, Section 98, Comal County School Land. A. J. Breman's No. 2 A. L. Biggerstaff, 450 feet north and 150 feet west of the SE cor. SE SW, Section 310, S.P.R.R. Survey. E. P. Campbell's No. 1 M. Alexander, Section 23, 3,500 feet south and 660 feet west of the NE cor., Section 23, E.T.R.R. Survey. Campbell's No. 1 M. Alexander, Section 24, 3,000 feet north and 2,400 feet east of the SW cor., Section 24, E.T.R.R. Survey. Humphrey Brothers' No. 8 T. W. Gary, 2,100 feet north and 450 feet west of the southeast corner of the north third of Section 40, Deaf and Dumb Asylum Land. Warren & Hays' No. 1 A. L. Biggerstaff, 150 feet north and east of the SW cor. SE NW, Section 310, S.P.R.R. Survey.

Clay County

R. T. Belcher and others' No. 4 H. C. Evans and others, 150 feet north and 1,470 feet east of the SW cor., Section 6, Parker County School Land, A-374.

Coleman County

Eastland Oil Co. and others' No. 5 I. Keeney-A, 250 feet north and 150 feet east of the southwest corner of the north 94 acres of the west 194 acres of the I. Keeney 374.84-acre tract out of the R. Cochran Survey No. 269. Eastland Oil Co. and others' No. 9 J. P. Morris-A, 150 feet north and west of the SE cor., Section 24, William Webber Survey No. 722. Midwest Exploration Co.'s No. 3 I. Keeney, 700 feet south and 200 feet east of the northwest corner of the south 100 acres of the west 194 acres of the I. Keeney 374.84-acre tract out of the R. Cochran Survey No. 269. S. B. Owens, Inc.'s No. 1 I. Keeney, 200 feet south and east of the northwest corner of the west 99 acres of the I. Keeney 229.14-acre tract out of the J. H. Wood Survey No. 483. L. Smith's No. 1 J. P. Morris, 126 feet south and 150 feet west of the northeast corner of the J. P. Morris 25-acre tract out of the J. H. Wood Survey No. 483. L. Smith's No. 2 Morris, 126 feet south and 721 feet west of the northeast corner of the J. P. Morris 25-acre tract out of the J. H. Wood Survey No. 483. L. Smith's No. 3 J. P. Mor-

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Mobile (Magazine Point, Ala.)
Philadelphia (Girard Point, Pa.)
Charleston, S. C.
Savannah, Ga.
New Orleans (Gretna, La.)
Port Arthur, Texas
Galveston, Texas

ris, 126 feet south and 1,292 feet west of the northeast corner of the J. P. Morris 25-acre tract out of the J. H. Wood Survey No. 483. Stepp & Keester's No. 1 J. P. Morris, 4,689 feet south and 150 feet west of the northeast corner of the R. Collard Survey No. 505. White Eagle Oil & Refining Co.'s No. 2 J. P. Morris, 648 feet south and 250 feet west of the NE cor., Section 25, William Webber Survey No. 722. White Eagle Oil & Refining Co.'s No. 5 Morris, 150 feet south and 550 feet west of the NE cor., Section 25, William Webber Survey No. 722. Anzac Oil Corp. and others' No. 1 J. McAdams, 660 feet north and east of the southwest corner of the east 160 acres of the south 263 acres of the east 423 acres of the H. Frazier Survey No. 244. Brooks-Dozier and Humphrey's No. 1 J. McAdams, 150 feet north and 876 feet east of the southwest corner of the south 263 acres of the east 423 acres of the H. Frazier Survey No. 244. Brooks-Dozier and Humphrey's No. 2 T. A. Sears, 150 feet south and 576 feet east of the northwest corner of the C. Shanks Survey No. 243. Continental Oil Co. and others' No. 13 M. T. Overall, 1,000 feet north and 200 feet west of the southeast corner of the J. H. Barkly Survey No. 701. Cranfill-Reynolds & Owens' No. 1 J. W. Vance, 150 feet north and east of the southwest corner of the A. Lane Survey No. 129. S. B. Owen, Inc.'s No. 1 A. T. Parker, 660 feet south and east of the NW cor., Section 46, William Doran Survey No. 666. Ransburger and others' No. 1 N. B. Riddle, 450 feet north and west of the southeast corner of the J. S. Loving Survey No. 249. C. S. Wilmott's No. 2 Lee Vaughn, 500 feet north and 750 feet east of the southwest corner of the Bonds & Saunders Survey No. 79.

Cooke County

Danciger Oil & Refining Co.'s No. 2 Huggins, 550 feet south and 2,700 feet east of the northeast corner of the J. F. Johns Survey A-544, being 450 feet south and 150 feet west of the northeast corner of its 76-acre lease out of the S.P. R.R. Survey No. 9, A-982.

Crane County

Gulf Production Co.'s No. 8 W. N. Waddell, 330 feet north and west of the SE cor., Section 2, Block B-24, School Land.

Crockett County

W. A. Moncrief and others' No. 1 H. R. Andrews, 1,320 feet north and 1,170 feet east of the SW cor., Section 57, Block UV, G.C.&S.F. Survey. Same company's No. 3 J. S. Todd, 660 feet north and west of the SE cor., Section 29, Block WX, G.C.&S.F. Survey.

Eastland County

Arkansas Fuel Oil Co.'s No. 8 Jacob Lyerla, 550 feet south and 1,500 feet east of the northwest corner of the J. Lyerla 352.75-acre tract out of the N. Ussury Survey. W. E. Davis and others' No. 1 R. H. Webb, 150 feet south and west of the northeast corner of the northwest of the R. H. Webb 160-acre tract out of Section 12, Block 2, H.&T.C. Survey. Lone Star Gas Co.'s No. 1 W. M. Allen estate, 914 feet north and 1,143 feet east of the SW cor., Section 3, east one-third of the Thomas A. Howell Survey. R. Outlaw and others' No. 1 J. W. Williams, 150 feet south and east of the NW cor. SE, Section 18, McLennan County School Land, Leagues 3 and 4. J. Bearman and others' No. 1 Mrs. J. E. Kincade and others' 660 feet south and east of the northwest corner of the J. E. Kincade and others' 80-acre tract out of Section 80, Block 4, H.&T.C. Survey. Belva Oil Co.'s No. 9 Frank Good, 810 feet north and 300 feet east of the SW cor. SE, Section 56, B.B.B.&C. Survey. Corzelius Brothers and Taggart and others' No. 1 D. K. Holland, 330 feet south and east of the NW cor. S half, Section 1, S.P.R.R. Survey. A. R. Foster and others' No. 3 J. E. Spencer, 450 feet north and 150 feet west of the SE cor. NW NE, Section 29, Block 2, H.&T.C. Survey. J. B. Gordon's No. 1 J. W. Clark, 150 feet north and 1,320 feet east of the SW cor., Section 13, Block 2, E.T.R.R. Survey. Gordon Corp.'s No. 2 Sneed, 800 feet north and 300 feet east of the SW cor., Section 20, Block 4, H.&T.C. Survey. Hoffer Oil Corp.'s No. 1 B. P. Fleming, 150 feet north and 644 feet west of the southwest corner of the R. W. G. Gage Survey, and located in the S. A. Bishop Survey. States Oil Corp.'s No. 7 A. Hise, 425 feet north and 250 feet west of the SE cor., Section 17, Block 4, H.& T.C. Survey. Texwa Oil Co. and Kirk's No. 1 Mrs. L. E. Murrell and others-B, 450 feet north and 150 feet west of the SE cor. SW, Section 29, Block 2, H.&T. C. Survey. Same company's No. 3 J. S. Turner, 450 feet north and 547 feet west of the SE cor. NW, Section 30, Block 2, H.&T.C. Survey.

Erath County

Associated Production Co.'s No. 1 T. J. Mauldin, 500 feet south and 315 feet east of the northwest corner of the T. J. Mauldin 250-acre tract out of the J. M. Espinosa Survey.

Glasscock County

World Oil Co.'s No. 2 L. S. McDowell and others-C, 330 feet south and 2,310 feet east of the NW cor., Section 21, Block 34, T-2-S, T.&P. Survey.

Grayson County

Groves & Ruwaldt's No. 1 Bishop, 450 feet north and 150 feet west of the most easterly southeast corner of the J. Rease Survey, A-1,007. Murchison Oil Co.'s No. 3 G. W. Wall, 563 feet north and 1,699 feet west of the southeast corner of the G. W. Wall tract out of the G. R. Greeves Survey, A-1,015.

Haskell County

Superior Oil Corp.'s No. 6 Reynolds Cattle Co., 1,790 feet south and 690 feet east of the northeast corner of the A. Rodriguez Survey, A-350, and located in the J. Fenner Survey, A-582.

Howard County

Ward Oil Co.'s No. 8 Dora Roberts, 1,485 feet north and 220 feet east of the SW cor., Section 137, Block 29, W.&N. W.R.R. Survey.

Hudspeth County

George E. Richardson and others' No. 1 S. J. Thaxton, at the C NW, Section 9, Block 16, School Land.

Irion County

Baker & Hodges' No. 1 F. Tankersley, 1,315 feet south and 150 feet east of the NW cor., Section 23, G.C.&S.F. Survey.

Jack County

J. L. Art and others' No. 1 J. A. Raley, 300 feet north and 312 feet east of the southwest corner of the north 60 acres of the east 120 acres of the west 220 acres of the J. A. Raley 333-acre tract out of the I. Hughson Survey A-256.

Buttram Petroleum Co.'s No. 1 Dave Lindsey, 1,460 feet north and 250 feet west of the southeast corner of the D. Lindsey 500-acre tract out of the I. N. Wright Survey A-898. C. A. Fluety's No. 2 Mrs. J. W. Maxey, 750 feet south and 150 feet east of the northwest corner of the west 40 acres of the east 80 acres of the Mrs. J. W. Maxey 160-acre tract out of Section 2, S.P.R.R. Survey, A-2,233.

Montague County

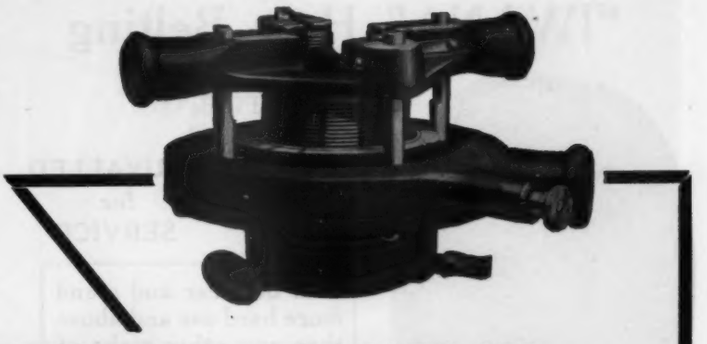
Farlyn Oil Co.'s No. 2 Cunningham and others-A, 1,350 feet south and 150 feet east of the northwest corner of its 61.08-acre lease out of the L. B. Norton Survey, A-574. Woods-Benton-Lest & McCall's No. 1 King, 243 feet south and 150 feet west of the northeast corner of the T. M. King 25-acre tract out of the M. Burnsides Survey, A-14.

Palo Pinto County

Texas Pacific Coal & Oil Co.'s No. 159 S. J. Stuart and others, 2,450 feet south and 1,750 feet west of the NE cor., Section 71, Block 4, T.&P. Survey.

Pecos County

McMan Oil & Gas Co.'s No. 4 J. H. Tippett, 370 feet north and 800 feet west of the southwest corner of the Runnels County School Land, A-2,169, and located in Section 108, Block 194, G.C.&S. F. Survey. W. A. Moncrief and others' No. 2 University, 330 feet south and 2,310 feet east of the NW cor., Section 13, Block 18, University Land. Pecos County Crude Oil Purchasing Co.'s No. 3 Pecos Valley Oil Co., 990 feet southeast of the northwest line and 1,320 feet northeast of the southwest line of Section 22, Block 10, H.&G.N. Survey. Shell Petroleum Corp.'s No. 1 T. S. Jackson, 330 feet northwest of the southeast line and 330 feet northeast of the southwest line of



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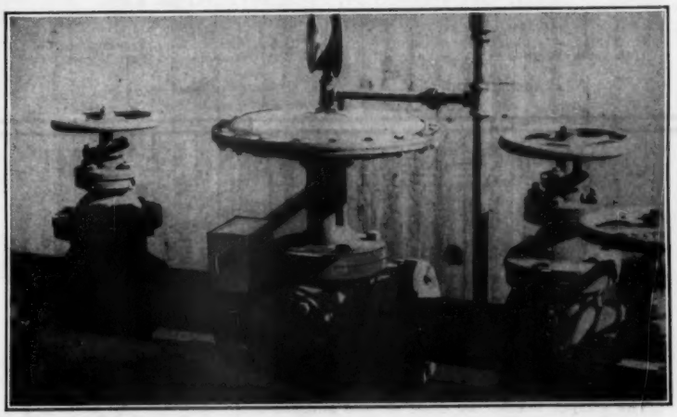

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Section 28, Block 3, H.&T.C. Survey. Same corporation's No. 1 University Land-B, 1,650 feet north and 330 feet east of the SW cor., Section 30, Block 16, University Land.

Presidio County

Texas Pacific Coal & Oil Co.'s No. 1 Bogel, 330 feet north and east of the SW cor., Section 83, Block 8, G.H.&S.A. Survey.

Reeves County

H. T. Hansford and others' No. 1 E. M. Williams, 150 feet north and east of the SW cor., Section 17, Block 6, H.&G. N. Survey. Roeser & Pendleton's No. 43 W. I. Cook-A, Section 61, 396 feet south and 1,868 feet west of the NE cor. SE, Section 61, Block 10, E.T.R.R. Survey. Same company's No. 44 Cook-A, Section 61, 807 feet south and 2,515 feet east of the NW cor. SW, Section 61, Block 10, E.T.R.R. Survey. Same company's No. 7 W. I. Cook-A, Section 88, 604 feet south and 1,516 feet east of the NW cor. SW, Section 88, Block 10, E.T.R.R. Survey. Same company's No. 8 Cook-A, Section 88, 260 feet north and 1,084 feet east of the SW cor. NW, Section 88, Block 10, E.T.R.R. Survey. Same company's No. 9 Cook-A, Section 88, 204 feet south and 1,516 feet east of the NW cor. SW, Section 88, Block 10, E.T.R.R. Survey.

Shackelford County

Big State Oil Co.'s No. 9 Russ-Webb, 750 feet north and 1,950 feet east of the SW cor., Section 17, Block 11, T.&P. Survey. Combest Oil Co.'s No. 4 Matthews, 150 feet south and east of the NW cor. W half SE, Section 30, Block 10, E.T.R.R. Survey. Dull & Earl's No. 2 Matthews-B, 480 feet south and 150 feet west of the NE cor. NE SE, Section 32, Block 10, E.T.R.R. Survey. A. J. Hughes' No. 1 G. R. Davis, at the C SE SW, Section 44, Block 13, T.&P. Survey. A. J. Hughes' No. 2 L. H. Hill, 500 feet north and west of the SE cor. SW SE, Section 2, Lunatic Asylum Land. Tom James' No. 1 W. P. Newell, 2,593 feet north and 3,070 feet east of the SW cor., Section 87, Block 10, E.T.R.R. Survey. Reading-Sedwick & Webb's No. 1 W. P. Newell, 543 feet south and 150 feet west of the NE cor., Section 115, Block 10, E.T.R.R. Survey. Roeser & Pendleton's No. 14 Cook-A, Section 62, 636 feet north and 220 feet east of the SW cor., Section 62, Block 10, E.T.R.R. Survey. M. O. Swallow and others' No. 2 W. D. Reynolds, 150 feet north and west of the SE cor. S half NE, Section 25, Block 11, T.&P. Survey. Tannehill and others' No. 6 J. B. Matthews, 950 feet north and 450 feet east of the SW cor., Section 27, Block 10, E.T.R.R. Survey. Tannehill Oil Co.'s No. 22 Newell, 150 feet south and 350 feet east of the southwest corner of the northeast 200 acres (square) of Section 11, Block 11, T.&P. Survey.

Stephens County

Texas Pacific Coal & Oil Co.'s No. 76 Charles Binney, 710 feet south and 1,080 feet west of the NE cor., Section 53, Block 4, T.&P. Survey.

Throckmorton County

Combest Oil Co.'s No. 1 Lee Tuton, 150 feet northeast of the southwest line and 150 feet northwest of the southeast line of the northeast 40 acres of the northwest 80 acres of the southeast 160 acres of the southwest 320 acres of the A. J. Kemp Survey, A-1,369. Hays & Hodges' No. 1 Matthews, 150 feet south and west of the NE cor., Section 233, Block 10, E.T.R.R. Survey. Morton and others' No. 2 Matthews, 150 feet north and 450 feet west of the SE cor. NW SE, Section 227, Block 10, E.T.R.R. Survey.

Upton County

Prairie Oil & Gas Co.'s No. 1 McQuatters, 330 feet north and 1,980 feet east of the southwest corner of the C. E. DeWitt Survey, Block X. Pure Oil Co.'s No. 1 Ed S. Hughes, 150 feet south of the north line and 150 feet northeast of the southwest line of the south 300 acres of the William Teer Survey, A-806.

Ward County

Continental Oil Co.'s No. 2 J. Sealy estate, 330 feet north and east of the SW cor., Section 81, Block A, G.&M.M.B.&A. Survey. C. C. Dorr and others' No. 1 J. L. Costley, 1,722 feet southeast of the northwest line and 990 feet southwest of the northeast line of the J. Howe Survey No. 2.

Taylor County

Dunnigan and Shell Petroleum Corp.'s No. 1 F. Davidson, 2,811 feet south and west of the NE cor. of the S half of the W. R. Willis Survey No. 122.

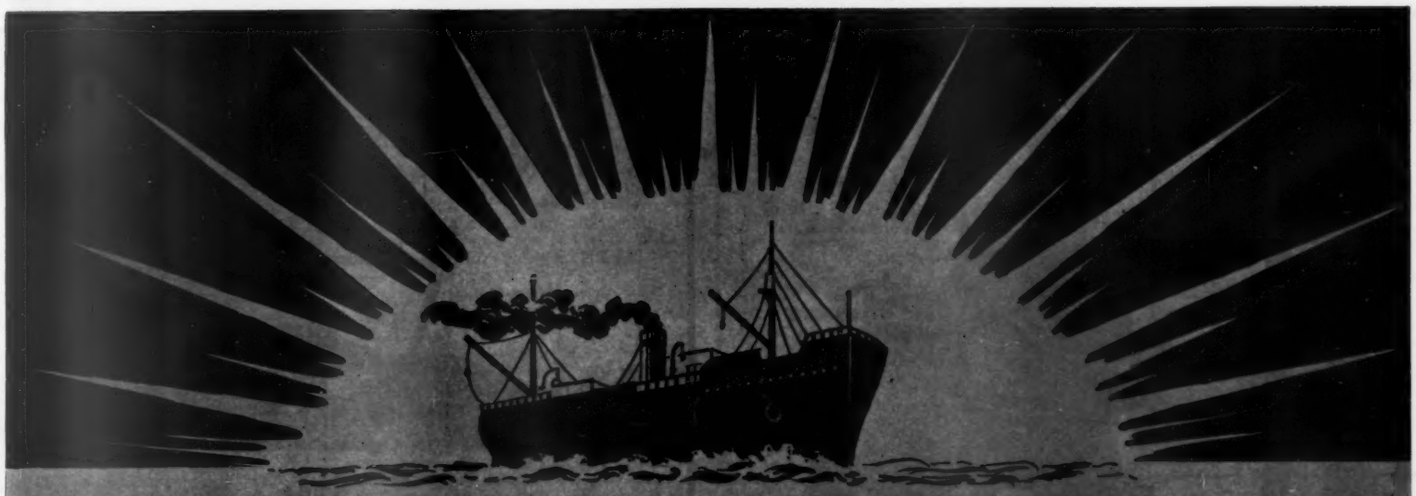
Wichita County

American Refining Co.'s No. 7 L. Morgan, 750 feet north and 150 feet west of the southeast corner of their 38.82-acre lease out of the L. Meadows Survey, A-785. R. P. Dorian's No. 2 L. Morgan, 1,490 feet north and 390 feet west of the southeast corner of the L. Morgan tract out of the L. Meadows Survey, A-808, being 150 feet north and 195 feet east of the southwest corner of his 7.4-acre lease. Duncan & White's No. 1 D. G. Parker, 150 feet north and east of the SW cor., Section 20, Palo Pinto County School Land, A-241. T. F. Hunter's No. 1 F. T. Jenne, 2,682 feet south and 1,051 feet east of the NW cor., Section 2, H. Hastie Survey, A-98. Mid-Continent Holding Corp. and others' No. 1 Rhodes and others, 600 feet south and 250 feet east of the NW cor., Section 8, Palo Pinto School Land, A-241. Same corporation's No. 2 Rhodes and others, 900 feet south and 150 feet east of the NW cor., Section 8, Palo Pinto County School Land, A-241. Same corporation's No. 3 Rhodes and others, 450 feet south and 150 feet east of the NW cor., Section 8, Palo Pinto County School Land, A-241. Same corporation's No. 4 Rhodes and others, 750 feet south and 500 feet east of the NW cor., Section 8, Palo Pinto County School Land, A-241. Same corporation's No. 1 M. G. Wilkerson and others, 450 feet south and 150 feet west of the NE cor., Section 3, J. M. McCool Survey, A-192. Same corporation's No. 2 Wilkerson and others, 150 feet south and 450 feet west of the NE cor., Section 3, J. M. McColl Survey, A-192. Stump-Melat & Graham's No. 2 Grudup, 749 feet south and 150 feet east of the NW cor., Section 10, League 4, Denton County School Land, A-417. H. H. Temple's No. 1 Norwood, 770 feet north and 950 feet east of the SW cor., Section 36, Palo Pinto County School Land, A-241. L. G. Bradstreet Co.'s No. 1 Love, 2,500 feet south and 1,250 feet east of the northwest corner of the W. S. Kennard Survey, A-171. Continental Oil Co.'s No. 3 J. L. and T. J. Waggoner, 150 feet north and west of the southeast corner of Lot 21, H. George Survey, A-454. Grayback Development Co.'s No. 1 B. N. Ferguson, 150 feet north and east of the SW cor. of the north 20 acres of Lot 10, J. T. Lewis Survey, A-462. H. Hines' No. 7 T. L. Burnett and others-A, 630 feet south and 428 feet west of the northeast corner of the east 25 acres of the SW SE, Section 6, S.A.&M.G. Survey, A-464. T. H. Hunter's No. 5 J. L. and T. J. Waggoner-C, 450 feet south and 150 feet east of the northwest corner of the H. George Survey, A-454. Hunter's No. 6 J. L. and T. J. Waggoner-C, 750 feet south and 150 feet east of the northwest corner of the H. George Survey, A-454.

J. G. Rowe and others' No. 5 J. L. and T. J. Waggoner, 750 feet south and 150 feet west of the NE cor., Lot 13, Section 2, G.C.&S.F. Survey, A-772. The Texas Company and others' No. 9 J. L. and T. J. Waggoner, 150 feet south and 474 feet east of the NW cor., Lot 28, H. George Survey, A-454. The Texas Company and others' No. 10 J. L. and T. J. Waggoner, 150 feet south and east of the NW cor., Lot 28, H. George Survey, A-454. United Production Co.'s No. 3 Allen & Kemp-F, 150 feet north and 250 feet west of the SE cor. of Block 29, Kemp Wichita Valley Land.

Wilbarger County

Apple & Brandeberry's No. 3 W. T. Waggoner, 308 feet north and 150 feet east of the SW cor. of their 40-acre lease out of Section 32, Block 4, H.&T.C. Survey. J. B. Baker and others' No. 12 W. T. Waggoner-B, 150 feet south and 2,790 feet west of the NE cor., Section 5, Block 5, H.&T.C. Survey, and located in the Thomas D. Purnell Survey, being 150 feet south and 1,170 feet east of the northwest corner of their 160-acre lease.



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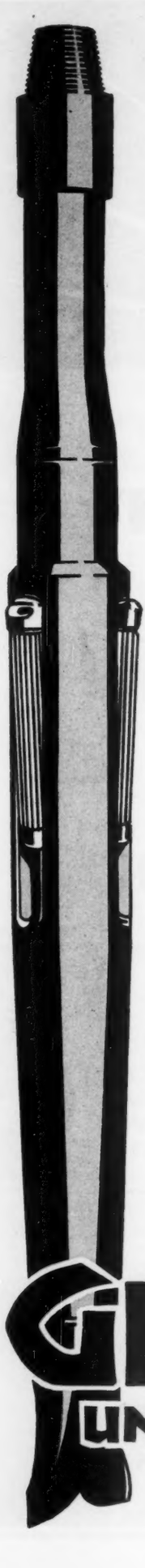

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C. P. Burton's No. 1 Waggoner-N, 150 feet north and east of the SE cor. SE SW, Section 3, Block 5, H.&T.C. Survey. Burton's No. 1 Waggoner-Peckham "C", 150 feet north and east of the SW cor. E half NE, Section 22, Block 4, H.&T.C. Survey. Consolidated Oil Co.'s No. 8 Waggoner-O, 660 feet north and 450 feet west of the SE cor. N half NW, Section 40, M.E.P.&P. Survey.

Empire Gas & Fuel Co.'s No. 6 Waggoner-A, 1,224 feet north and 205 feet west of the SE cor. NW, Section 32, Block 4, H.&T.C. Survey. Empire Gas & Fuel Co.'s No. 8 W. T. Waggoner-A, 40 feet north and 150 feet west of the SE cor. NW, Section 32, Block 4, H.&T. C. Survey. Empire Gas & Fuel Co.'s No. 19 W. T. Waggoner-B, 1,430 feet north and 589 feet east of the SW cor., Section 32, Block 4, H.&T.C. Survey. Same company's No. 20 Waggoner-B, 870 feet north and 674 feet west of the SE cor. SW, Section 32, Block 4, H.&T.C. Survey. Same company's No. 12 Waggoner-C, 660 feet south and 205 feet west of the NE cor. NW, Section 25, Block 4, H.&T.C. Survey. Fain-McGaha Oil Corp.'s No. 16 Waggoner-W, 1,050 feet north and 350 feet east of the southwest corner of their lease "W" out of Section 32, Block 4, H.&T.C. Survey. Same corporation's No. 4 Waggoner-Y, 660 feet south and 1,265 feet west of the NE cor. NW SE, Section 43, M.E.P.&P. Survey. Same corporation's No. 5 Waggoner-Y, 205 feet south and 605 feet west of the NE cor. NW SE, Section 43, M.E.P.&P. Survey. C. J. Ferguson and others' No. 1 Waggoner, 150 feet north and west of the SE cor. of the NW of the southwest 160 acres (square) of Section 36, Block 4, H.&T.C. Survey. Golding & Cochran and others' No. 2 Waggoner-J, 150 feet north and 660 feet east of the SW cor. NW SE, Section 17, Block 4, H.&T.C. Survey. T. Harris and others' No. 1 Waggoner, 150 feet south and west of the NE cor. W half SW, Section 22, Block 4, H.&T.C. Survey. Hoover Scientific Development Co.'s No. 1 Waggoner-Section 10, 900 feet south and 400 feet west of the NE cor., Section 10, Block 2, H.&T.C. Survey. King Royalty Co.'s No. 3 Waggoner-B, 150 feet north and 750 feet west of the SE cor. E half SW, Section 21, Block 4, H.&T.C. Survey.

W. T. Knight's No. 3 Waggoner-F, 450 feet north and east of the SW cor. S half SE, Section 21, Block 4, H.&T.C. Survey. Lewis Production Co.'s No. 5 Waggoner-B, 150 feet south and 660 feet east of the NW cor. SW SE, Section 17, Block 4, H.&T.C. Survey. Same company's No. 6 Waggoner-B, 150 feet south and west of the NE cor. SW SE, Section 17, Block 4, H.&T.C. Survey. Phillips Petroleum Co.'s No. 4 Waggoner-O, 330 feet north and west of the SE cor. SW SE, Section 45, Block 4, H.&T.C. Survey. J. D. Proctor's No. 1 Waggoner, 205 feet north and east of the SW cor. W half of the south 80 acres of the E half of Section 41, Block 4, H.&T.C. Survey. Robert Oil Corp.'s No. 2 W. T. Waggoner, 150 feet south and east of the NW cor. SE SE, Section 17, Block 4, H.&T.C. Survey.

Shaw Oil Co.'s No. 1 W. T. Waggoner-H, 3,810 feet south and 892 feet east of the SW cor., Section 5, Block 5, H.&T.C. Survey, and located in the George Butler Survey, being 150 feet north and east of the southwest corner of their 115-acre lease. Staley-Wynne & Co.'s No. 11 W. T. Waggoner-G, 200 feet south and 455 feet west of the NE cor. N half SE, Section 32, Block 4, H.&T.C. Survey. Same company's No. 12 Waggoner-G, 605 feet north and 205 feet east of the SW cor. of the W half of SE, Section 32, Block 4, H.&T.C. Survey. Same company's No. 2 Waggoner-R, 185 feet south and 225 feet west of the NE cor. SE NE, Section 26, Block 4, H.&T.C. Survey. The Texas Company's No. 20 Waggoner-E, 205 feet north and east of the SW cor. NE NE, Section 25, Block 4, H.&T.C. Survey. Same company's No. 21 Waggoner-E, 205 feet south and east of the NW cor. SE NE, Section 25, Block 4, H.&T.C. Survey.

E. P. Waggoner's No. 2 Waggoner, 205 feet south and 660 feet west of the NE cor. of the NW of the SW of Section 18, Block 4, H.&T.C. Survey. Waggoner Refining Co.'s No. 7 Waggoner-J, 205 feet north and 660 feet east of the SW cor. NW NE, Section 25, Block 4, H.&T.C. Survey. Same company's No. 5 Waggoner-J, 205 feet north and east of the SW cor. NW NE, Section 25, Block 4, H.&T.C. Survey. Same company's No. 1 Waggoner-O, 150 feet north and east of the SW cor. E half NW, Section 22, Block 4, H.&T.C. Survey. Wichison Oil Corp.'s No. 2 Waggoner, 150 feet north and west of the SE cor. N half of W half SW, Section 21, Block 4, H.&T.C. Survey.

Winkler County

Southern Crude Oil Purchasing Co.'s No. 2 T. G. Hendricks T-89-L, 440 feet south and 1,320 feet east of the NW cor., Section 15, Block B-12, School Land.

Young County

C. W. Boller and others' No. 2 Hunt, 150 feet north and 160 feet west of the southeast corner of the T. Hunt 102.6-acre tract out of Section 160, T.E.&L. Survey. Same company's No. 3 T. Hunt, 450 feet north and 760 feet west of the southeast corner of the T. Hunt 102.6-acre tract out of Section 160, T.E.&L. Survey. Same company's No. 4 T. Hunt, 150 feet north and 1,060 feet west of the southeast corner of the T. Hunt 102.6-acre tract out of Section 160, T.E.&L. Survey.

J. D. Carpenter's No. 2 M. Barrett, 450 feet south and east of the northwest corner of the M. Barrett 225-acre tract out of the Edward W. Sergeant Survey, A-253. J. D. Carpenter's No. 3 M. Barrett, 150 feet south and 750 feet east of the northwest corner of the M. Barrett 225-acre tract out of the Edward W. Sergeant Survey, A-253. L. Franklin's No. 1 T. L. Richardson, 150 feet south and west of the NE cor. of the west 35 acres of the J. G. Maupin Survey, A-1,-483. Franklin and others' No. 2 O. R. Carpenter, 150 feet north and east of the southwest corner of the east 50 acres of the O. R. Carpenter 100-acre tract out of the Edward W. Sergeant Survey, A-253. W. L. Hawkins' No. 3 J. C. Owens, 225 feet south and 450 feet east of the northeast corner of the G. P. Stewart 110-acre tract, and located in the J. C. Owens 160-acre tract in Section 1, B.B. B.&C. Survey, A-35. J. L. McMeans' No. 1 E. M. Eichelberger, 150 feet south and west of the NE cor. of E half of the north 160 acres of Section 1,454, T.E.&L. Survey.

Panhandle Refining Co.'s No. 1 E. F. Brown, 150 feet north and west of the SE cor. of the W half of the south 70 acres of Section 290, T.E.&L. Survey. Panhandle Refining Co. and others' No. 2 P. K. Pittman-A, 1,628 feet north and 140 feet east of the most southerly southwest corner of the J. T. Deister Survey, A-1,589. A. H. Parks and others' No. 3 O. R. Carpenter, 150 feet north and west of the SE cor. of the W half of the O. R. Carpenter 100-acre tract out of the Edward W. Sergeant Survey, A-253. Perkins & Cullum's No. 1 J. L. Lemmond, 150 feet north and east of the SW cor. of the N half of the J. L. Lemmond 160-acre tract out of Section 1, B.B.B.&C. Survey, A-35.

W. R. Stafford's No. 1 A. C. Bentley, 150 feet south and east of the NW cor. W half NE, Section 283, T.E.&L. Survey. Steed & Gaus' No. 17 L. A. Snider, 1,190 feet south and 2,770 feet east of the northwest corner of the Robert Wilson Survey, A-1,276. Stewart-Wooten & Reed's No. 1 O. Andrews, 450 feet south and east of the northwest corner of the O. Andrews tract out of Section 201, T.E.&L. Survey. Wise & Jackson's No. 10 R. J. Calvin, 150 feet south and 175 feet east of the northwest corner of the R. J. Calvin 200-acre tract out of the A. Rohus Survey, A-240. T. G. Shaw and others' No. 1 J. H. McLaren and others, 3,328 feet north and 850 feet west of the southeast corner of the east 500 acres of the J. H. McLaren and others 877.6-acre tract out of the John Conner Survey, A-57.

Corrections

Brown County: Lloyd Oil Corp's No. 3 W. C. Duff, 150 feet north and 1,516 feet east of the southwest corner of the W. C. Duff 36.3-acre tract out of the R.

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See Classified Wants on Pages 124-125

Honeycutt Survey No. 623, and located in the James Kinney Survey No. 624.

Irion County: Kimbrough & Flinch's No. 1 Tankersley, 160 feet south and 200 feet west of the northeast corner of the south half of the F. Willig Survey No. 712.

Pecos County: Mid-Kansas Oil & Gas Co.'s No. 30 I. G. Yates-A, 250 feet south and 685 feet east of the SW cor., Section 60, Block 1, I.&G.N. Survey, and located in the I. G. Yates Survey, A-8,-195.

Presidio County: Texas Pacific Coal & Oil Co.'s No. 1 W. W. Bogel, 1,140 feet north and 205 feet east of the SW cor., Section 83, Block 8, G.H.&S.A. Survey.

Wilbarger County: Apple-Brandeberry Oil Co.'s No. 1 W. T. Waggoner, 40 feet north and 292 feet east of the southwest corner of their 40-acre lease out of Section 32, Block 4, H.&T.C. Survey. Consolidated Oil Co.'s No. 7 Waggoner-O, 150 feet south and 750 feet west of the NE cor. N half NW, Section 40, M.E.P. &P. Survey.

W. T. Knight's No. 5 Waggoner-A, 150 feet south and 750 feet west of the NE cor. of their 20-acre lease out of Section 40, M.E.P.&P. Survey.

Melat Oil Co.'s No. 8 W. T. Waggoner-A, 3,150 feet south and 1,145 feet west of the NE cor., Section 10, Block 4, H.&T.C. Survey.

HUDSON'S BAY COMPANY REPORT ON OPERATIONS

CHATHAM, Ontario, July 27.—At the "general court" of the Governors and Company of Adventurers of England Trading Into Hudson's Boy—more commonly known as the Hudson's Bay Co.—held at London, England, Charles V. Sale, governor of the company, in his annual report thus referred to the activities of the company in connection with oil development:

"As I foreshadowed a year ago, the Hudson's Bay-Marland Oil Co. have commenced the drilling of test wells. In the Viking Field, No. 1 well is now producing natural gas; No. 2, situated about a mile to the east, is in course of drilling. Five wells have been commenced in other areas, which are considered promising.

"The well in the Turner Valley Field which the Imperial Oil Co. was drilling on our land on a royalty basis has been producing about 80 bbls. of naphtha per day for some months past and is bringing in a small income. Another well is now being drilled on the same block.

"Our friends, the Marland Oil Co. hold to the belief that the prospects are good. It may also interest you to know that the production of crude oil and naphtha in the province of Alberta increased from 319,000 bbls. in 1927 to 487,000 bbls. in 1928.

"And now, having given you all the indications I can on this subject, may I ask you not to count on any large revenue from oil-bearing lands until we are in a position to give you information based on results?"

YOUNT-LEE BUYS SITE

BEAUMONT, Tex., July 27.—The Harvey W. Gilbert Co. has recently sold an industrial site to the Yount-Lee Oil Co., of Beaumont, located on the Beaumont-Port Arthur ship channel, just north of the city of Port Arthur. The site is served by the Kansas City Southern Industrial Belt Railway, Southern Pacific Railway, Beaumont-Port Arthur electric interurban line, industrial gas mains, industrial water and electricity, and also industrial electrical power.

GULF PORT SHIPMENTS

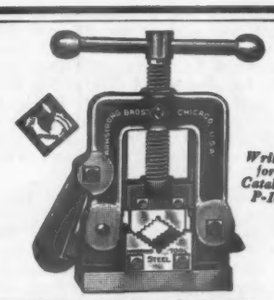
For the information of an inquirer, the crude and refined oil shipments from Gulf Coast ports for the month of October, 1928, were:

Coastwise

Crude	6,516,808.80 bbls.
Refined oils	8,761,054.98 bbls.

Export

Crude	362,485.00 bbls.
Refined oils	2,334,311.72 bbls.



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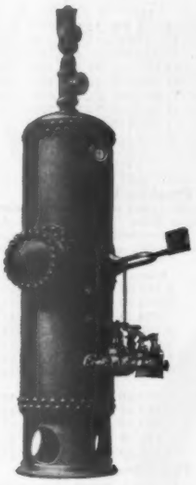

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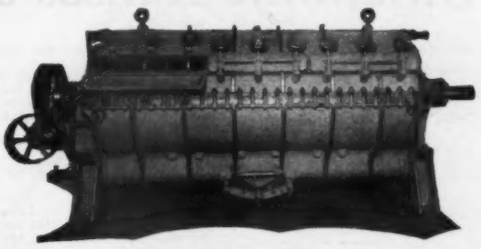

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Plate 1.

The six foot high Northern Pump shown in Plate 1 loads California Crudes into Tankers at the rate of 5,000 barrels per Hour. The Herringbone Reduction Gear built into this pump steps the driver speed from 960 R.P.M. down to the Pump Speed of 175 R.P.M. quietly.

The Northern Foam Pumping unit pictured in Plate 2 is typical of dozens of similar Northern Units, protecting many Refineries and Farms.

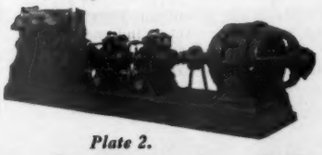


Plate 2.

NORTHERN PUMP CO.
MINNEAPOLIS, MINN.
OFFICES IN ALL PRINCIPAL CITIES

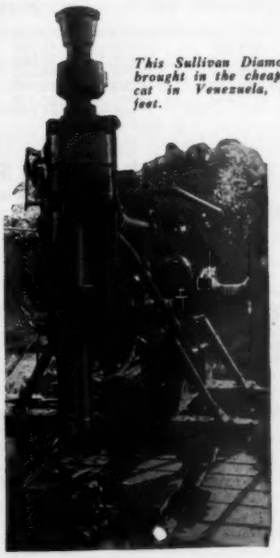
Cheaper Wildcats With Sullivans

20% less for operation—23% less for equipment—39% less weight to be transported

A major oil company has just completed two wildcats in Venezuela with a Sullivan Diamond Drill.

One hole went to 4,350 feet in five months and nine days. In the other, 4,005 feet of 6⅝-in. casing was set and cemented one month and twenty-six days after spudding in.

Continuous core was recovered wherever desired.



This Sullivan Diamond Drill brought in the cheapest wildcat in Venezuela, at 4,350 feet.

The engineer in charge worked up complete figures on the diamond drill, and on a rotary outfit, for casing a hole to 6,000 feet, and drilling it to 7,000 (diamond drills have taken core from below 6,700 feet).

His figures show that the Sullivan Equipment weighs only 61% and costs only 77% as much as the rotary outfit.

He also says that his experience shows the cost of operation, to run 20% less than for other rigs—due to savings in labor, fuel, water, rigging up, bits, and other items.

For cheaper wildcatting, for deep tests, or for structure exploration use Sullivan Diamond Drills. They will drill any formation as encountered, go to any depth, and furnish perfect core wherever desired. *The coupon will bring complete information.*

Use this Coupon

Send me free literature on diamond drilling.

Name_____
Address_____
_____
_____City_____
I am interested in ☐ Wildcatting ☐ Structure testing ☐ Deep tests.

Sullivan Machinery Company
825 Wrigley Bldg., CHICAGO

Oklahoma-Kansas and Eastern Pipe Line Report

OKLAHOMA-KANSAS

Pipe Line Statement for June.

Runs

	Month	Dly. av.
Prairie P. L. Co.*	4,590,000	153,000
Gulf P. L. Co.	1,928,503	64,283
Texas P. L. Co.	776,754	25,892
Empire P. L. Co.	1,467,410	48,914
Magnolia Petroleum Co.	2,168,966	72,299
Cosden P. L. Co.	825,769	27,525
Sinclair P. L. Co.*	3,090,000	103,000
Oklahoma P. L. Co.	3,076,298	102,543
Other Lines*	6,270,000	209,000
Total June	24,193,700	806,456
Total May	24,994,401	806,271
Difference	801,701	185

Shipments

Prairie P. L. Co.†	6,482,036	216,068
Gulf P. L. Co.	1,861,270	62,042
Texas P. L. Co.	1,140,621	38,021
Empire P. L. Co.	1,307,260	43,575
Magnolia Petroleum Co.	2,259,312	75,310
Cosden P. L. Co.	825,769	27,525
Sinclair P. L. Co.†	3,541,996	118,066
Oklahoma P. L. Co.	3,139,447	104,648
Other Lines*	6,300,000	210,000
Total June	26,857,711	895,250
Total May	26,895,092	867,584
Difference	37,381	27,666

Stocks

Prairie Oil & Gas Co.*	36,972,000
Gulf P. L. & Gypsy Oil Co.	9,805,481
The Texas Company	8,351,672
Empire P. L. Co.	4,067,028
Mid-Continent Petr. Corp.	3,646,027
Sinclair Crude Oil Purch. Co.*	20,400,000
Magnolia Petroleum Co.	9,899,785
Oklahoma P. L. Co.	3,139,985
Carter Oil Co.	10,865,322
Other Companies*	10,675,000
Total June	117,822,300
Total May	118,519,294
Difference	696,994

*Estimated. †Prairie and Sinclair shipments include Texas crude oil.

Note—Stocks do not include approximately 5,600,000 bbls. of crude oil held in storage on private tank farms and leases.

EASTERN PIPE LINE REPORT

Runs from Wells

In the following table will be found the regular receipts from wells by various pipe lines in New York, Pennsylvania, West Virginia, Ohio, Kentucky and Indiana for May and June:

	May,'29	June,'29
Nat. Transit	253,769.83	249,968.12
S. W. Pa. P. L.	100,936.95	92,002.02
Eureka P. L.	380,915.89	352,969.84
Buckeye P. L. (Macksburg)	343,829.07	319,203.71
Buckeye P. L. (Cleveland)	12,404.92	11,542.95
Buckeye P. L. (Lima, etc.)	111,166.94	129,902.81
Indiana P. L.	5,648.56	6,724.29
Cumberland P. L.	199,988.52	171,863.19
N. Y. Transit	31,526.85	30,739.37
Tidewater P. L.	260,931.30	258,170.51
Pure Oil	62,790.66	55,379.02
Emery P. L.	69,891.53	65,056.05
Paragon Dev.	17,045.54	15,728.09
Stoll Oil Ref.	6,113.39	5,767.22
Total	1,856,959.95	1,765,016.19
Daily average	59,901.93	58,833.87

Note—Indian Refining Co. also reported other receipts of 329,785.68 bbls. Paragon Refining Co. had other receipts of 205,750.79 bbls. Paragon Development had other receipts of 192.83 bbls.

Petroleum Deliveries

The following tables exhibit the shipments of regular deliveries of various pipe lines in New York, Pennsylvania, West Virginia, Ohio, Kentucky for May and June:

	May,'29	June,'29
Nat. Transit	571,534.68	525,961.70
S. W. Pa. P. L.	384,900.26	443,209.38
Eureka P. L.	242,388.07	249,279.44
Buckeye P. L. (Macksburg)	219,775.55	192,141.28
Buckeye P. L. (Cleveland)	2,185.24	2,429.40
Buckeye P. L. (Lima, etc.)	1,597,379.34	1,574,302.18
Indiana P. L.	1,456,199.10	1,380,019.54
Cumberland P. L.	212,951.47	218,131.40
N. Y. Transit	282,843.83	250,768.40
Northern P. L.	190,228.92	160,597.19
Tidewater P. L.	210,039.70	222,328.15
Pure Oil	61,580.15	58,555.68
Emery P. L.	74,596.34	67,073.09
Paragon Ref.	186,897.16	199,644.69
Paragon Dev.	19,208.47	17,693.24
Total	5,712,708.28	5,562,134.76
Daily average	184,280.91	185,404.19

Indian Refining Co. reported other deliveries of 37,231.21 bbls.

Gross Stocks

The gross stocks held by various pipe lines in the oil producing sections of New York, Pennsylvania, West Virginia, Ohio, Indiana and Kentucky at the close of May and June:

	May,'29	June,'29
Nat. Transit	800,104.62	691,399.07
S. W. Pa. P. L.	466,368.92	535,525.28
Eureka P. L.	1,224,524.89	1,214,331.14
Buckeye P. L. (Macksburg)	463,437.44	462,009.23
Buckeye P. L. (Cleveland)	54,068.74	50,131.07
Buckeye P. L. (Lima, etc.)	1,917,019.67	2,088,348.18
Indiana P. L.	507,698.71	542,191.55
Cumberland P. L.	581,865.71	539,241.87
Southern P. L.	488,042.66	471,032.50
N. Y. Transit	233,636.63	256,751.69
Northern P. L.	408,913.03	332,496.47
Tidewater P. L.	1,291,934.65	1,279,682.60
Pure Oil	13,042.02	10,619.05
Emery P. L.	9,439.08	7,937.53
Paragon Ref.	17,668.51	23,504.69
Indian Ref.	152,604.26	145,225.30
Paragon Dev.	7,540.83	6,051.72
Tuscarora	265,649.33	264,796.11
Total	8,903,559.70	8,921,275.05
Decrease	74,612.15	
Increase		17,715.35

Grades of Oil

The following table shows the amount of the different grades of oil held by the eastern pipe lines at the close of May and June showing the gross stocks of the above fields:

	May,'29	June,'29
Pennsylvania	3,350,662.61	3,279,171.77
Lima	587,235.33	635,542.29
Kentucky	787,127.03	718,933.39
Mid-Continent	3,783,393.60	3,914,745.95
Illinois	390,141.13	372,881.65
Total	8,903,559.70	8,921,275.05

Daily Average Runs

The following table shows the daily average runs of the Pennsylvania, Lima and Kentucky oil fields for the past four years:

	1926	1927	1928	1929
January	55,630	56,209	52,904	51,749
February	60,394	61,298	57,002	51,833
March	61,644	63,247	57,485	54,252
April	63,019	60,927	56,812	58,444
May	60,580	60,284	62,067	59,902
June	61,121	62,757	58,230	58,833
July	63,206	58,674	57,144	.....
August	61,815	60,870	57,745	.....
September	64,639	60,285	53,487	.....
October	161,132	147,080	58,100	.....
November	67,774	57,275	53,565	.....
December	58,755	53,089	52,025	.....

Daily Average Shipments

The following table gives daily average shipments from the Pennsylvania, Lima and other fields for the past four years:

	1926	1927	1928	1929
January	156,056	141,227	146,465	165,721
February	159,488	138,534	167,368	159,387
March	150,239	133,777	158,883	161,474
April	152,374	140,227	172,935	169,737
May	160,998	144,594	180,559	184,281
June	160,267	149,772	188,024	185,404
July	160,045	151,850	189,470	.....
August	161,929	188,653	192,853	.....
September	158,915	144,213	194,138	.....
October	161,132	147,036	176,000	.....
November	172,608	150,975	176,898	.....
December	136,428	144,504	173,572	.....

Gross Stocks

In the following table will be found the gross stocks of the various lines of the Pennsylvania, Lima and Kentucky oil fields, including oil received from other lines at the close of each month for the past three years:

	1927	1928	1929
January	9,718,908	12,276,710	7,596,564
February	10,119,162	12,180,419	8,738,835
March	10,794,044	12,239,725	9,002,058
April	11,112,295	11,740,135	8,978,172
May	11,353,381	11,652,468	8,903,560
June	11,493,673	11,287,678	8,921,275
July	11,458,128	10,819,331	.....
August	11,989,115	10,236,743	.....
September	12,212,716	9,660,910	.....
October	12,047,661	9,229,709	.....
November	11,939,740	8,366,553	.....
December	12,340,297	7,539,555	.....

Franklin Pipe Co.

The following table exhibits the condition of the Franklin Pipe Line at the close of business for the months named and not counted in the stocks and averages reported above:

	Runs	Shipments	Stocks
1928—			
June	3,153.08	2,779.02	17,922.58
July	2,902.50	3,628.02	17,197.06
August	2,874.11	3,350.13	17,721.04
September	2,820.31	5,255.42	15,285.93
October	1,289.93	538.89	17,551.93
November	1,663.53	788.47	19,426.99
December	3,053.60	3,167.53	19,426.99
1929—			
January	2,099.90	.....	19,313.06
February	2,469.47	6,873.20	17,009.23
March	3,330.82	3,595.01	16,745.04
April	4,864.07	4,243.59	17,365.52
May	2,688.59	2,455.54	17,598.57

The Illinois Field

The following table gives the report of the Illinois Pipe Line Co. in Illinois:

Gross stocks, July 1	2,538,116.68
Runs from wells	543,196.34
Other receipts	664,331.85
Regular deliveries	776,354.88
Other deliveries	352,697.17

The amount of Illinois oil run by the Tidewater Pipe Co. in June was 25,258.36 bbls. Deliveries were 42,491.09 bbls. Adding these figures to those of the Illinois Pipe Line Co. makes the runs and deliveries as follows:

	Runs	Deliveries
1928—		
July	612,286.49	565,678.37
August	639,074.85	671,864.02
September	570,307.91	737,293.50
October	626,147.64	626,290.40
November	576,332.88	702,589.93
December	584,633.00	491,517.26
1929—		
January	570,727.38	545,084.66
February	517,330.17	503,387.70
March	722,319.67	586,049.60
April	515,374.27	654,297.96
May	608,981.60	673,812.83
June	568,454.70	818,845.97

Tidewater Pipe Co., Ltd., also delivered in June 108,920.66 bbls. Oklahoma oil.

AVERAGE DAILY RECEIPTS OF CALIFORNIA OIL AT ATLANTIC AND GULF COAST PORTS

Average bbls. per day—	ATLANTIC PORTS Baltimore	Boston	New York	Philadelphia	Others	Total	GULF COAST PORTS Galveston	New Orleans Baton Rouge	Port Arthur Sabine Pass	Tampa	Total	Total all ports
January	15,838	.....	16,676	11,838	7,938	52,290	.....	.....	.....	.....	5,161	57,451
February	14,214	.....	28,750	17,250	11,607	81,831	.....	.....	.....	.....	2,750	85,571
March	19,903	968	31,258	18,581	7,355	78,065	.....	.....	.....	.....	.....	78,065
April	16,667	.....	32,333	13,233	2,234	64,467	.....	.....	.....	.....	7,333	65,200
May	16,226	2,416	31,326	10,806	2,129	62,903	.....	.....	.....	.....	.....	62,903
June	14,866	3,167	23,100	10,300	6,100	57,533	.....	.....	.....	.....	.....	57,533

AVERAGE DAILY IMPORTS OF PETROLEUM AT PRINCIPAL UNITED STATES PORTS

Average bbls. per day—	ATLANTIC PORTS Baltimore	Boston	New York	Philadelphia	Others	Total	GULF COAST PORTS Galveston	New Orleans Baton Rouge	Port Arthur Sabine Pass	Tampa	Total	Total all ports
January	11,936	2,903	130,065	34,871	15,709	201,484	.....	24,805	4,095	1,287	40,193	241,677
February	13,750	15,071	135,179	32,750	17,893	214,643	.....	24,357	821	143	35,321	249,964
March	18,548	26,064	145,516	39,162	28,162	257,453	.....	42,581	2,322	.....	44,903	302,356
April	19,723	18,367	137,223	50,267	22,567	248,167	6,867	25,066	10,367	1,500	43,800	291,967
May	29,806	19,258	138,000	49,936	22,323	259,322	6,677	26,323	3,000	1,323	37,323	296,645
June	31,433	8,667	134,600	42,967	18,300	235,967	8,600	22,633	11,800	2,033	45,066	281,033

GROSS PRODUCTION IN THE UNITED STATES FOR 12 MONTHS (REVISED)

(In barrels of 42 gallons)

1928-29		California	Oklahoma	Texas	Kansas	Arkansas	Louisiana	Rocky Mts.	Eastern	Total
July:	Month	19,754,458	18,809,188	22,055,737	3,171,548	2,792,139	2,238,090	2,492,586	3,487,000	74,800,746
	Daily average	637,241	606,748	711,475	102,308	90,069	72,131	80,406	112,484	2,412,927
August:	Month	19,444,899	20,840,804	22,339,131	3,147,058	2,711,787	1,989,264	2,561,840	3,556,000	76,590,783
	Daily average	627,255	672,284	720,448	101,518	87,477	64,170	82,640	114,709	2,470,670
September:	Month	18,908,169	22,456,860	21,554,269	3,047,250	2,540,070	1,830,225	2,432,430	3,229,000	75,998,273
	Daily average	630,272	748,562	718,207	101,575	84,669	61,007	81,047	104,300	2,533,279
October:	Month	19,430,992	23,431,071	22,176,853	3,068,460	2,652,484	1,836,221	2,571,822	3,612,000	78,769,903
	Daily average	626,806	755,841	715,376	98,660	85,564	59,233	82,962	116,516	2,540,964
November:	Month	19,907,526	22,078,680	20,791,798	2,977,800	2,476,080	1,801,914	2,388,870	3,348,000	76,770,668
	Daily average	663,584	735,956	693,059	99,260	82,536	60,064	79,629	111,600	2,505,689
December:	Month	21,574,703	22,425,722	22,180,102	2,988,400	2,521,571	1,846,841	2,289,040	3,581,000	79,407,379
	Daily average	695,958	723,410	715,487	96,400	81,341	59,576	73,840	115,516	2,561,528
January:	Month	23,385,939	22,575,874	23,412,226	2,861,641	2,453,526	1,807,887	2,076,070	3,439,000	82,012,163
	Daily average	754,385	728,254	755,232	92,311	79,146	58,318	66,970	110,936	2,646,554
February:	Month	22,300,707	20,464,164	20,816,209	2,557,968	2,154,194	1,569,930	1,965,656	3,113,000	74,941,228
	Daily average	796,454	730,863	743,484	91,356	76,936	56,068	70,202	111,184	2,676,472
March:	Month	24,324,729	20,828,262	24,358,592	2,951,076	2,303,724	1,756,153	2,195,823	3,586,000	82,314,359
	Daily average	784,669	672,202	784,669	95,196	74,314	56,650	70,838	115,677	2,655,302
April:	Month	23,295,060	20,236,290	23,493,097	3,112,740	2,188,680	1,702,479	2,085,030	3,524,000	79,636,376
	Daily average	776,502	674,512	783,102	103,758	72,956	56,750	69,501	117,467	2,654,546
May:	Month	24,053,351	21,345,453	24,489,101	3,665,099	2,220,158	1,713,261	2,252,522	3,879,000	83,617,945
	Daily average	775,915	688,563	789,965	118,229	71,618	55,267	72,662	125,129	2,697,353
June:	Month	24,624,627	20,561,112	24,698,029	3,636,150	2,112,270	1,699,581	2,180,752	3,887,000	83,399,521
	Daily average	820,821	685,371	823,267	121,205	70,337	56,653	72,692	129,567	2,779,984
	Total 12 Months	261,005,160	256,062,480	272,365,144	37,175,190	29,126,683	21,791,846	27,492,441	42,241,000	947,259,344
	Daily average	715,083	701,541	746,207	101,850	79,799	59,704	75,322	115,729	2,595,231

EASY RUNNING SMOOTH RUNNING

With TIMKEN taper roller main and pinion bearings . . . . with 99.4% mechanically efficient continuous tooth Herringbone gears . . . . and with every moving part running in an oil bath within a dust-proof crank case . . . . the Gaso Figure 1508 Pump is built to *consume a minimum amount of power and to give maximum service.*

The notable efficiency and endurance of this pump merit investigation by every man who is concerned with pump purchase or operation. Interchangeable liner fluid end gives capacities varying from 63 bbls. per hour at 800 lbs. pressure to 250 bbls. per hour at 250 lbs. pressure. Arranged for gas engine or electric motor operation.

GASO PUMP & BURNER MFG. COMPANY
Tulsa, Oklahoma

210 Petroleum Bldg.,
Fort Worth, Texas

535 Fifth Avenue,
New York, N. Y.

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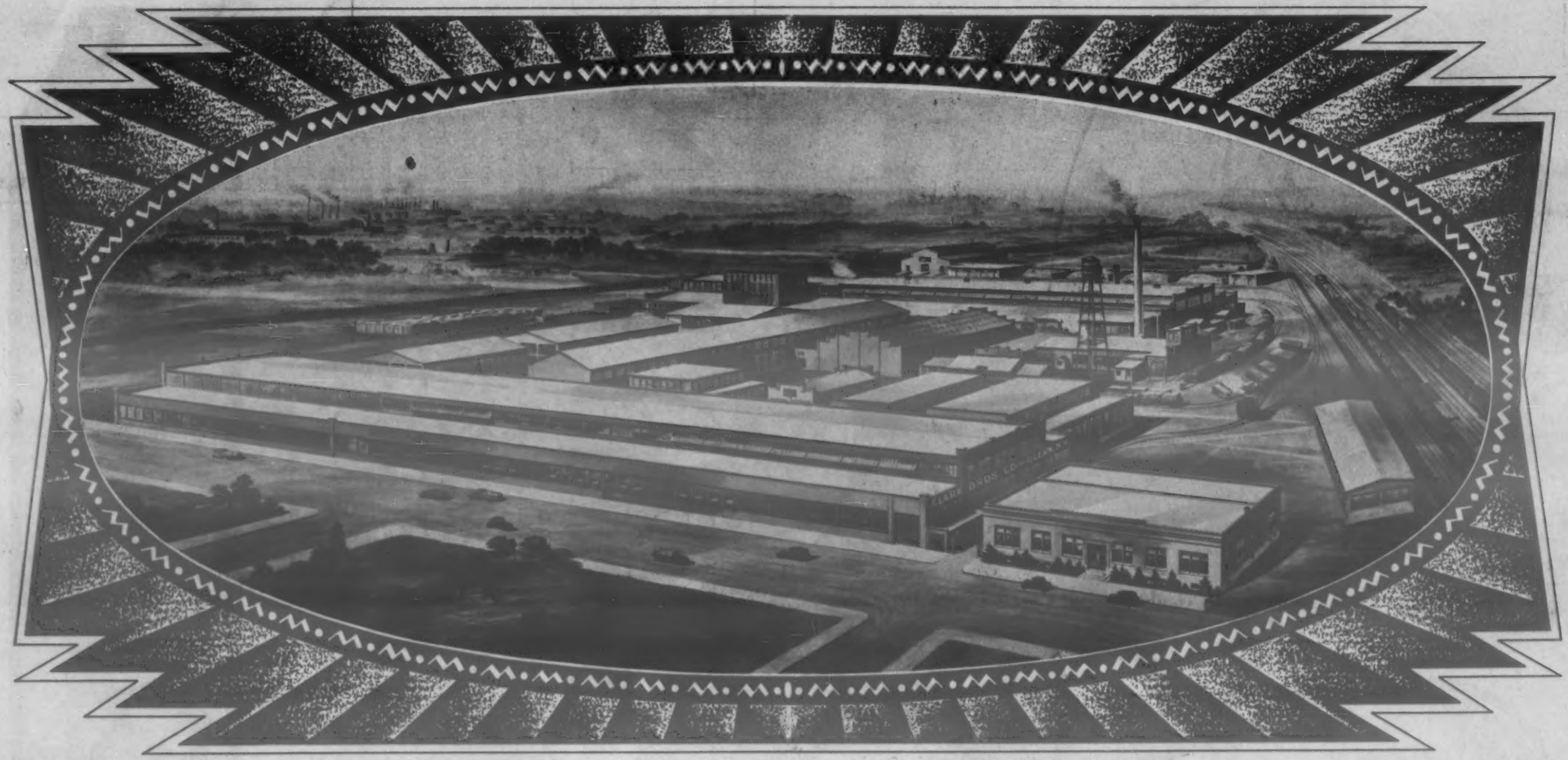
for every oil industry need



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are built in a plant which has every modern facility for correct manufacture...

Clark Bros. Co. Olean, N.Y.

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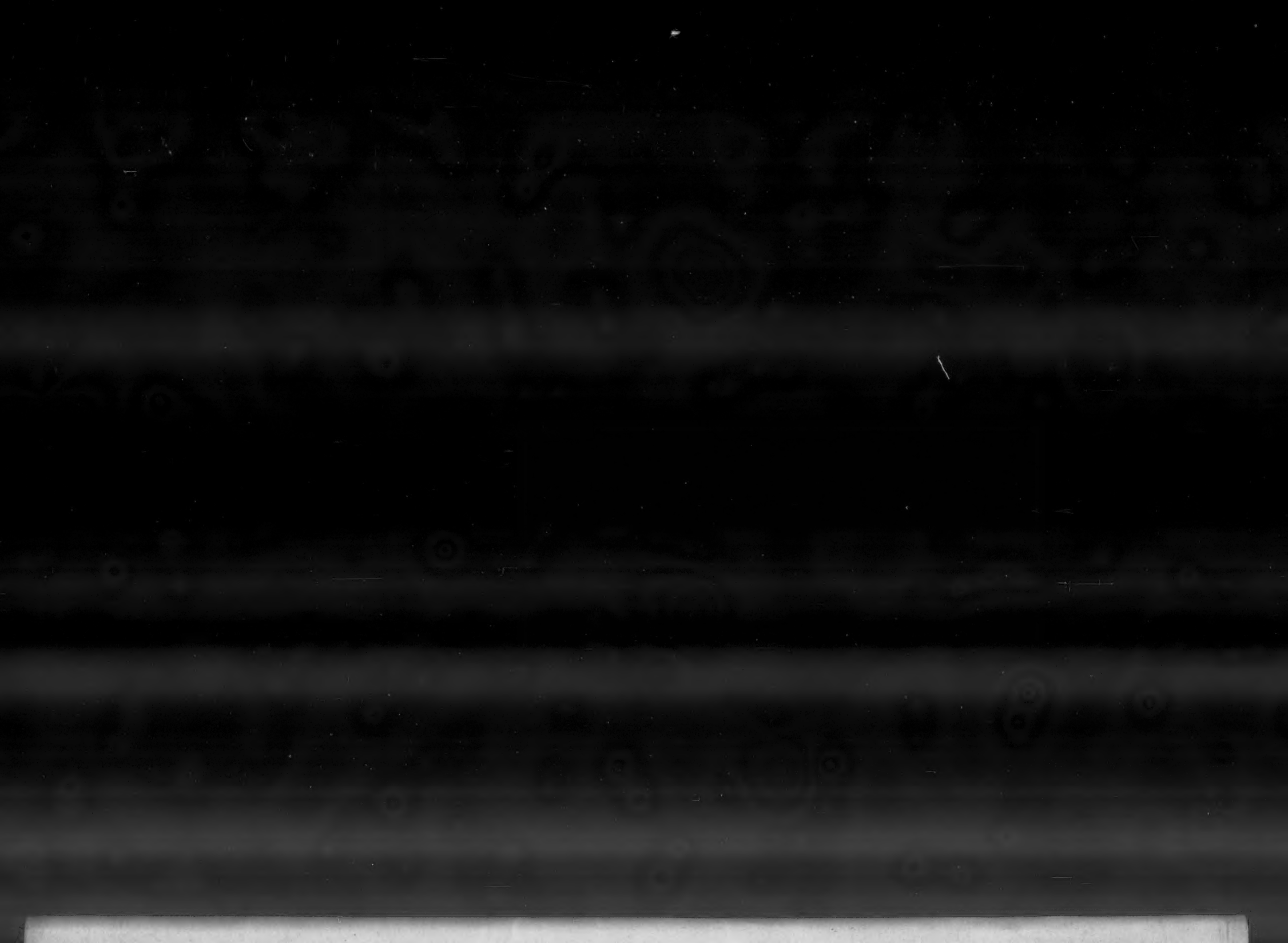
Clark Bros. Company, Olean, New York. Export Office: 150 Broadway, New York City. Branches and Warehouses: 125 W. First St., Tulsa; McCamey and Sweetwater, Texas; Artesia, N. M. California: Smith, Booth, Usher Co., 226 S. Central Ave., Los Angeles.